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An Illustrated Record of Mining, Metallurgical, Railway, Financial, Industrial, And Engineering Progress.

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No. 3135.—Vol. LXV.

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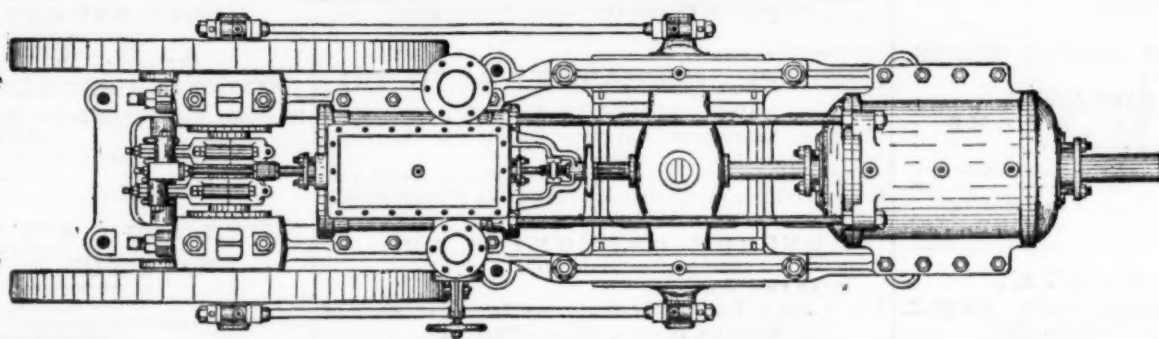
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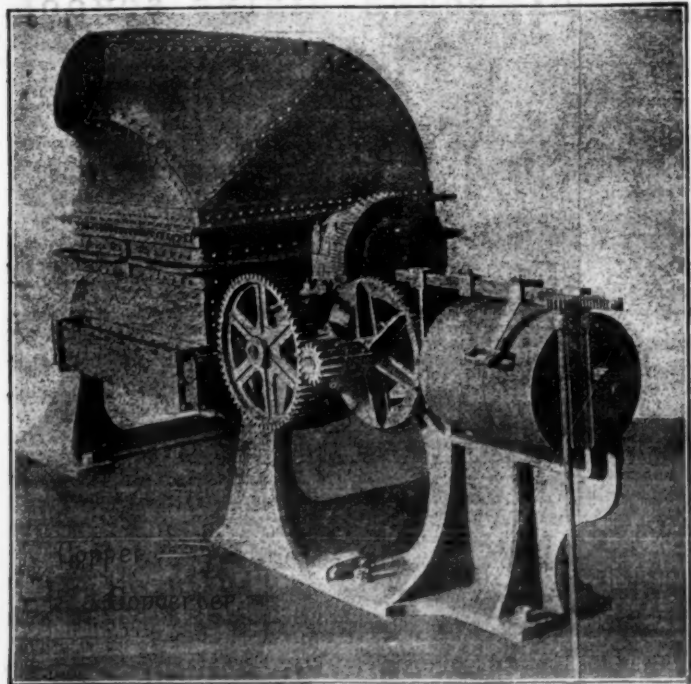
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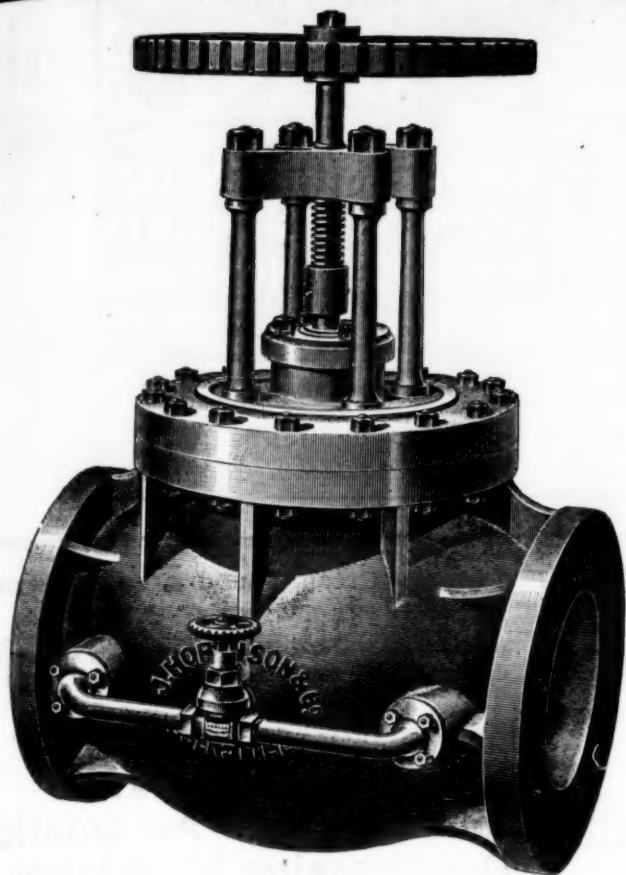


FIG. 119.

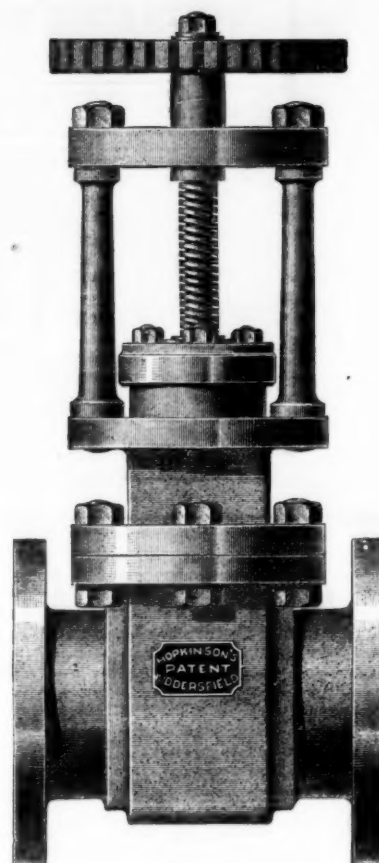


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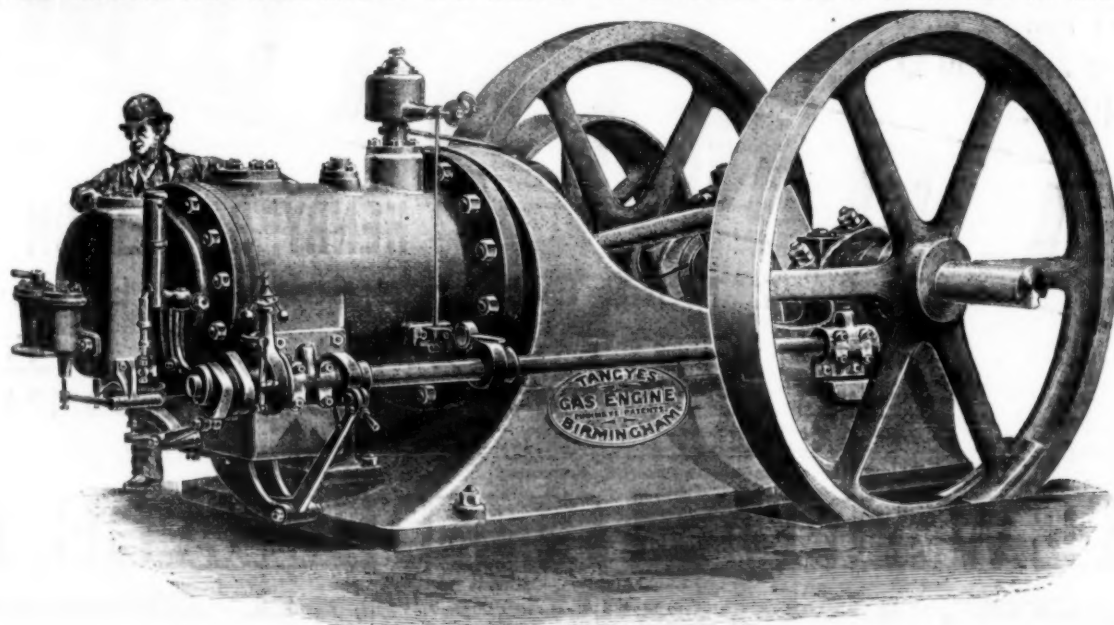
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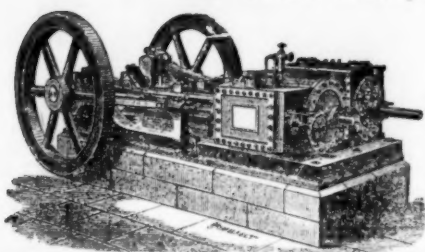
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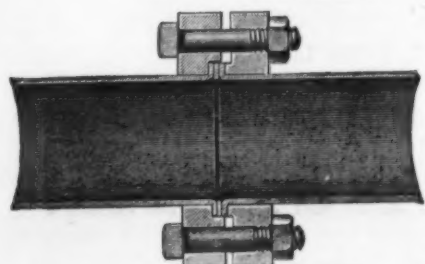
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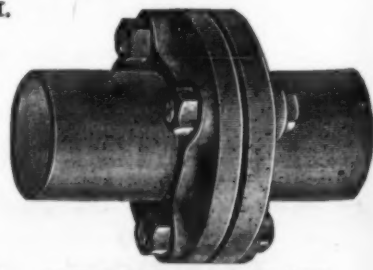
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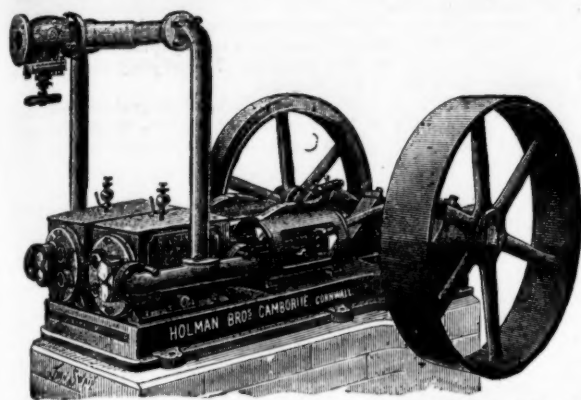
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Head Offices: 41, OSWALD STREET, GLASGOW.

HOLMAN Bros., Camborne, Cornwall.

ESTABLISHED 1839.

Patentees and Sole Makers of
"THE CORNISH" ROCK DRILL and "THE CORNISH" COMPRESSOR.



FIRST
SILVER MEDAL,
Highest Award,
Mining Institute
Contest, 1881.



FIRST
SILVER MEDAL
Highest Award,
Royal Cornwall
Polytechnic
Jubilee Exhibition
Contest, 1882.

Three Makers
represented.

Five Makers
represented.

AWARDED SILVER MEDAL INTERNATIONAL
INVENTIONS EXHIBITION, 1885.

RECORD OF WORK DONE

At Botallack Mine, St. Just, Cornwall, **TWELVE MEN** with **TWO** new Patent **CORNISH ROCK DRILLS** drove, sunk, and rose **288 FATHOMS** in **12 MONTHS**, equal to five times the Speed of Hand Labour.

At Wheal Grenville Mine, Camborne, Cornwall, **SIX MEN** with **TWO** new Patent **CORNISH ROCK DRILLS** started from the **150 FATHOMS** level and put up in **EIGHT MONTHS** a **11 FEET** by **5 FEET PERPENDICULAR RISE 46 FATHOMS 5 FEET 6 INCHES**, and about midway drove **1 FATHOM 5 FT.** No communication of any kind was effected until holing to the Shaft brought down from surface.

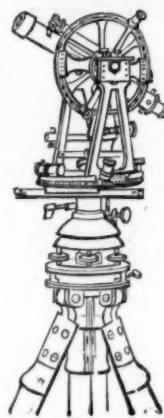
Estimates for **ROCK BORING PLANT** and **GENERAL MINING MACHINERY** on Application.

London Offices: 7 and 9, LEADENHALL BUILDINGS, E.C.

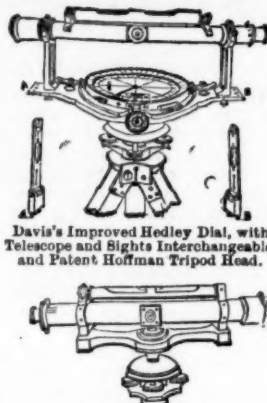
JOHN DAVIS AND SON,

ALL SAINTS WORKS, DERBY;

118, NEWGATE STREET, LONDON.



Transit Theodolite with Patent
Hoffman Tripod Head, and
Trough Compass.



Dumpy Level with
Hoffman Patent Tripod Head.

MINING, SURVEYING, AND
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SECTION (A) MATHEMATICAL DEPARTMENT AND SAFETY LAMPS,
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Gold Medal Awarded Mining Exhibition, 1890.
A. B. C. CABLE CODE, 4TH EDITION.

AWARDS: CRYSTAL PALACE, 1890; TASMANIA, 1891; KIMBERLEY, 1892.

CONCENTRATION.

The Clarkson-Stanfield Concentrator (Limited).

In the CLARKSON-STANFIELD process of Concentrating Refractory and Complex Ores no water is required; dust is reduced to a minimum; the loss of Mineral through water-borne Slimes is obviated.

OUTPUT $\frac{1}{2}$ TO 2 TONS PER HOUR, ACCORDING TO SIZE OF MACHINE.

CONCENTRATOR TO BE SEEN IN OPERATION AT THE COMPANY'S ONLY ADDRESS

6, COLONIAL AVENUE, MINORIES, LONDON, E.

The Machine is superior to Sieves for Sizing Homogeneous Substances, such as Emery, Sand, and Powders, and may be used to great advantage in the preparation of Ochre.

N.B.—The owners of the Carndochan Mine, near Bala, North Wales, will, by arrangement, show their CLARKSON-STANFIELD plant working on a Refractory Low Grade Gold Ore.

NEW PATENTS.

LIST OF APPLICATIONS for New Patents relating to Mining Metallurgical, Engineering, Railway and kindred matters, specially compiled from official sources for the "Mining Journal" by Messrs. Rayner and Company, Patent Agents, 37, Chancery Lane, London, W.C., who will forward all information regarding them free on application.

- 15177 Walter Lees, Commercial Street, Halifax.—Improvements in steam or water valves, the said improvements being also applicable to water gauges.—September 2.
- 16413 James Edmund Carroll, 60, Queen Victoria Street, London.—Improvements in furnaces and fire-grates.—September 2.
- 16448 James Galloway, 55, Low Street, Kelghley.—Improvements in steam traps.—September 3.
- 16533 Robert Atkinson and John Earnshaw Leach, 29, Wycliffe Road, Shipley, Yorks.—Improvements in railway chafers.—September 4.
- 16644 John Mackenzie, 115, St. Vincent Street, Glasgow.—A swing bridge for railways.—September 4.
- 16667 Hugh Donald Fitzpatrick, 70, Wellington Street, Glasgow.—Improvements in miners' picks, pickaxes, and the like.—September 6.
- 16668 John Steel, Dixon Shanks, Thomas Harrison, and John MacCormac, 42, Brougham Street, Belfast.—Improvements in furnaces of steam boilers.—September 6.
- 16736 Johannes Feleger, 47, Lincoln's Inn Fields, London.—Improvements in or connections with apparatus for extracting gold and silver from cyanide solutions by electricity.—September 6.
- 16756 Henry Shield and David James Howells, 15, Water Street, Liverpool.—Improvements in steam generators.—September 7.

SPECIFICATIONS PUBLISHED.

17069, Meldrum and others, furnaces, 1894; 17950, Keith, valves for hot water boilers, 1894; 17996, Bocher, locomotive boilers, 1894; 18023, Sulman, obtaining precious metals from ores, 1894; 19289, Sweet, steam and water separator, 1894; 19696, Brophy, water heaters and boilers, 1894; 19754, Booty, boiler furnaces, 1894; 20468, Solignac, steam generators, 1894; 21138, Schmidt, boilers, 1894; 22731, Lewis and others, steam boiler tubes, 1894; 2131, Spencer, valve and cock for boilers, 1895.

The above specifications published may be had of Messrs. Rayner and Co., 37, Chancery Lane, London, at 10s. each, including postage.

RUSSIA'S GOLD AND OTHER ORE DEPOSITS.—Some recent discoveries of gold have been made in the district of the Don, on the Nagaijooje and the Nagaijoochik estates, and from what has hitherto transpired the findings are worth working. The district in question possesses also deposits of zinc ore, silver-carrying lead ore, copper and silver ore, which have been to some extent surveyed and tested, and of which the regular working has in places commenced. As regards the gold, this is found in cracks which have arisen through some change or convulsion of the ground, and have been filled with sulphur ore. One ton of ore contains on an average not less than 6 grains gold; specially selected ore has given as much as 17 grains gold. French engineers have found gold in several places, and after their departure a number of other gold-carrying veins have been discovered. Samples of ore taken in different directions have shown a greatly varying percentage of gold, and the dimensions of the veins differ also very considerably. Exhaustive examinations of the findings and accurate analyses of the ore are being continued. The average yield at present seems to be about 5 solatnik gold per 100 pounds of ore, which corresponds with a proportion of 1:76,800. A regular working of the gold ore findings is about to be taken in hand.

JOINT-STOCK COMPANIES.

NEW REGISTRATIONS.

THE following are among the joint-stock companies registered at Somerset House since our last notice:—

- Walworth Gold Mine (Limited).—Registered September 4, by J. H. Farmer, 25, Austinfriars, E.C. Capital £30,000, in £1 shares. Objects: To adopt and carry into effect an agreement expressed to be made between J. Crowder of the one part, and this company of the other part; to acquire any lands, mines, water and other rights, leases, claims, concessions, &c., in Western Australia, or elsewhere; to develop and turn to account the same, and to carry on the business of a mining, milling, smelting, and metallurgical company in all its branches.
- Barborton Gold Reefs (Limited).—Registered September 4, by Jordan and Sons, 120, Chancery Lane, W.C. Capital £100,000, in £1 shares. Objects: To adopt and carry into effect an undetailed agreement; to acquire certain mines, mining and other rights, grants, claims, concessions, options, metalliferous land, and other property; to develop and turn to account same, in such manner as the company shall deem expedient, and generally to carry on the business of a mining, milling, and smelting company in all its branches.
- Barborton Consols (Limited).—Registered September 4, by Jordan and Sons, 120, Chancery Lane, W.C. Capital £100,000, in £1 shares. Objects: To adopt and carry into effect an agreement, particulars of which do not transpire, for the acquisition of certain mines, mining rights, grants, concessions, options, &c., in South Africa; to develop and turn to account the same, and to carry on the business of a mining, milling, smelting, and metallurgical company in all or any of its branches.
- Corderoy Syndicate (Limited).—Registered September 4, by Ingle, Holmes, and Sons, 20, Threadneedle Street, E.C. Capital £100,000, in £1 shares. Objects: To acquire freehold and other farms, properties, mines, grants, leases, options, metalliferous land, &c., in Africa or elsewhere; to develop and turn to account the same, and to carry on in all or any of their respective branches the businesses of miners, millers and smelters, farmers and graziers, &c.
- Heidelberg Proprietary Mining Company (Limited).—Registered September 4, by Goodall and Cross, 21, Essex Street, Strand, W.C. Capital £80,000, in £1 shares. Objects: To adopt and carry into effect an agreement between H. H. Grayham of the one part, and this company of the other part, to acquire any concessions, rights, powers, privileges, &c., of any kind, over and concerning any property in South Africa or elsewhere, and to develop and turn to account the same.
- Dixie Gold Mining Company (Limited).—Registered September 4, by W. H. Smith and Son, Gresham House, E.C. Capital £25,000, in £1 shares. Objects: To acquire freehold and other farms, properties, mines, water and other rights, lands, grants, leases, claims, concessions, &c.; to develop and turn to account the same, and to carry on business as land and mine owners, miners, metallurgists, metal workers, builders, contractors, engineers, &c., in all or any of their respective branches.
- Cape Gold Fields (Limited).—Registered September 5, by Jordan and Sons, 120, Chancery Lane, W.C. Capital £100,000, in £1 shares. Objects: To acquire any lands, estates, gold or other mines, &c., in any part of the world; to develop and turn to account the same, and to carry on the business of a mining, milling, smelting, and metallurgical company in all or any of its branches.
- Federated Mines Prospecting and Finance Company (Limited).—Registered September 7, by W. K. Hick, 2, Church Court, Clement's Lane, E.C. Capital £250,000, in £1 shares. Objects: To adopt and carry into effect an agreement made September 7 between G. W. Brocklesby of the one part, and this company of the other part; to acquire certain stocks, shares, farms, mines, mining rights, grants, leases, claims, concessions, &c., and to develop and turn to account the same.

CONTRACTS OPEN:

FOR MINE, QUARRY, RAILWAY, AND ENGINEERING WORK, STORES, &c.

We shall be obliged by being promptly placed in possession of particulars regarding contracts open for competition, and of the results of successful tenders. In the latter case contract prices should be given.

The date given is that by which tenders must be delivered, in nearly all cases further information can be obtained on application at the address given. In applying for such the name of "The Mining Journal" should be mentioned as the original source of the information, concerning which further particulars are required.

HOME CONTRACTS.

Coal, September 23 (Beverly).—For the supply of coal for 12 months: from October 1, for the G. & S. Committee, to be delivered, as from time to time directed, by and at contractors' expense, to be at Keadby, or at the pits, or at the railway station, Beverley, according to the terms of contract. The coal to be of the best kind, well screened, free from sulphur, bats, bind, refuse, and dirt, and to be weighed (20 cwt. to the ton) upon the Corporation machine. Further information may be obtained of the gas manager, Mr. James Gibson, Gasworks, Beverley, and tenders, endorsed "Tender for Coal," must be delivered at the office of Mr. J. Willis Mills, Town Clerk, Guildhall, Beverley, by 23rd inst.

Lighting Conductors, September 24 (Leeds).—For providing and fixing several new lightning conductors, and for repairing others, upon and at the workhouse premises in Beckett Street, for the Guardians. Specifications can be obtained on application at the Offices. Tenders to be sent to Mr. John King, Union Offices, East Parade, Leeds, by 24th inst.

Testing Bore, September 26 (Hull).—For putting down pump and supplying power for pumping 1,000 gallons of water per hour for a fortnight for testing bore, for the Sealecoates Board of Guardians. Tenders to Mr. W. Jackson, assistant clerk, Lincoln's Inn Buildings, Buxialley Lane, Hull, by 26th inst.

Precipitating Tanks, October 7 (Cambridge).—For the construction of precipitating tanks, sludge tanks, press-house buildings, and for other works in connection therewith, for the Corporation. Drawings may be seen, and copies of the specification, quantities, form of tender, and agreement obtained, on and after 23rd inst., at the offices of the engineer, Mr. J. T. Wood, M.I.C.E., 2, Cook Street, Liverpool, and 9, Alexandra Street, Cambridge. Sealed tenders, endorsed "Tender for Precipitating Tanks, Press-house Buildings, &c., Contract No. 2," to be delivered at the office of Mr. J. E. L. Whitehead, Town Clerk, Guildhall, Cambridge, before 5 p.m., on October 7.

Waterworks, October 7 (Kells, Ireland).—For the construction of waterworks to supply the town of Kells with water, for the Town Commissioners. The works comprise the construction of service reservoir, filter beds, pump house, and turbine pit, with the supply of turbines and pumps, leads to turbines and tail race, and the laying of several miles of 5 inch, 4 inch, and 3 inch pipes, with all valves, hydrants, and fountains, &c. Plans and specifications can be seen, and a general plan of the scheme, together with copy of quantities, can be obtained upon payment of £1 (which will not be returned) either at the office of the engineer, Mr. J. H. H. Swiney, M.I.C.E., Avenue Chambers, Belfast, or at the office of Mr. James J. Brady, Town Clerk, Town Hall, Kells. Tenders to be delivered in sealed envelopes, marked "Tender for Waterworks," and addressed Chairman, Town Commissioners, Kells, co. Meath, by 12 noon on October 7.

Pipes, &c., October 8 (Southampton).—For manufacturing and delivering in Southampton (1) certain cast-iron pipes and special castings; (2) certain sluice-valve, hydrants, and surface boxes; and (3) the carting, laying, jointing, and completion of certain lines of pipes, the fixing of valves and hydrants, and other work connected therewith, for the Corporation. Drawings may be seen, and specifications, conditions, and forms of tender obtained from Mr. W. Matthews, Waterworks Engineer, Southampton, upon payment of £1 (for each copy, which will be returned upon receipt of a bona fide tender. Separate sealed and endorsed tenders must be left at the office of Mr. Geo. B. Balder, Town Clerk, Municipal Offices, Southampton, by two p.m. on October 8. The contractors will be required to pay their workmen the standard rates of wages recognised in the various trades at the date of the contract.

PARIS LETTER.

(FROM OUR SPECIAL CORRESPONDENT.)

English financiers and French speculation.—Advance in Rand mining shares.—English capital in Algeria.—A valuable new metal.

THE visit of Sir Edgar Vincent and of Mr. I. B. Barnato to this city has done much to improve the tone of the mining share market. Not that such an improvement was particularly needed, as the demand for scrip has been rather too active during the past fortnight to be sustained for any length of time, and it is advisable, now and then, that the market should lay under the passing influence of a reaction. The somewhat uncertain attitude of the Stock Exchange likewise counted for something in calming the spirit of speculation, and for a day or two there was a slight decline in all but the most prominent shares. It is significant, however, that these fluctuations are far less marked in Paris than they are in London, and, so far as the Bourses from being unduly influenced by the Stock Exchange, the Paris market has actually given the necessary stimulus, when needed, to the shares on the other side of the Channel. The apathy of the past few days, slight as it has been, is dispelled by the arrival of the two great financial magnates, who are said to be considering proposals in conjunction with several well known Paris capitalists, that may have an excellent effect upon the Kaffir market. The chief object of Mr. Barnato's visit is to found a branch establishment of his bank in this city, and at the same time to bring his other ventures well before the public. So far, the Rand millionaire has been credited with giving the cold shoulder to French capital; but if he has done so in the past he is evidently ready to atone for his neglect. He states that he intends shortly to place a few shares in his bank upon the Paris market at the same price as they were introduced in London, and he will invite French support for his other undertakings which he is to bring out very soon. What these undertakings are is something of a mystery, but a light may be thrown upon them by the repeated references of Mr. Barnato to the great possibilities of development in his South African property. In a few days the Rand millionaire will leave for Vienna, and will then proceed to Buda-Pesth, St. Petersburg, and Brussels, where he will found branch establishments of his bank, and no doubt, as the result of this tour, a very active stimulus will be given to the interest in gold mining already being manifested throughout the Continent.

Except when the brokers proclaim a truce on settling days, or when, for the same reason, there is very little buying and selling with London, the market remains extremely active, and, indeed, too much so for people who think that values have gone up quite high enough. Yet it is certain that the speculation is not so reckless or unreasonable as formerly. Bayers will no longer take up shares outside the immediate circle of gilt-edged securities at the prices recently quoted, and many of these have settled down to a level which fairly represents their proper investing value. The leading concerns, however, which are backed up by the influence of the great financial magnates, are commanding exorbitant prices, and the values are likely to advance still higher. East Rands are called for at a little over 291 francs, and they seem destined very soon to reach the three centuries. Chartered are extensively dealt in at 231 francs, and a great deal is also being done in Ferrelas at 527.50 francs. After being left alone for some time Simmer and Jacks have suddenly advanced to 597.50 francs, while Transvaal Consolidated shares have also improved to 115.60 francs. Shebas, Kleinfonteins, Langlaagte, Geldenhuys, and Randfonteins are all upholding their position as sound securities. The only weakness in the market is the number of bogus shares that are being introduced in an underhanded manner. They are readily taken up by inexperienced investors, and if this practice is allowed to continue it may seriously compromise the position of the Kaffir market. To put an end to the machinations of the dishonest promoter several well-known capitalists have this week banded themselves into a sort of "ring" with a view of suppressing bogus concerns. At the next settlement a holocaust is to be made of the scrip that is known to be absolutely worthless, and it is hoped that this purification will do much to improve the tone of the mining market.

While investors continue to display the greatest confidence in the future of South African enterprise, the French Government is becoming more and more uneasy to the extent of considering ways and means for checking the progress of the speculation in gold mines. It is said that the Minister of Finance, the Minister of the Interior, and the Minister for Foreign Affairs are receiving reports upon the influence of mining speculation on Government stock. Certainly, the result is not likely to calm their apprehensions, for all sorts of Government securities have been completely ignored for months past; and, while gold mining shares have been rapidly advancing, the Rentes have become weaker and weaker. At no time has so little business been done in them. In view of this diversion of capital from native securities, which produce scarcely anything, to a foreign industry which offers the most solid guarantee of profitable returns, the Government has sounded a note of alarm to the effect that no less than 80 millions sterling of French money has been sunk in South African and West African ventures. A more independent estimate, however, places the amount at a much lower figure, and at the same time shows that the current value of the scrip held in France is about ten times what was originally paid for it, so that, so far, the French have made an excellent thing out of gold mining speculation. At the same time, it is thought desirable that something should be done to awaken public interest in purely national mining undertakings, but the efforts so far made to bring French mines to the front have not been successful. It is also proposed to resuscitate the old Mines d'Or de Faria, in the province of Minas Geraes, in Brazil, which, like all the other South American ventures run with French capital, has passed through very troublesome times. The mine is poor in gold, but the promoters think that a good profit may be secured by the employment of modern appliances. It must be confessed that they show more optimism than the investors, who do not seem inclined to subscribe the 900,000 francs necessary for the undertaking. In fact, promoters think nowadays that any moribund enterprise may be galvanised into life by the magic promise of gold; but, fortunately, the public is showing a little more circumspection. In Algeria, however, there is prospect of more success. An English company is said to have secured a concession of some auriferous territory, which was very favourably reported on some time ago by J. B. Dumas, the well-known chemical expert. The report attracted no attention whatever in this country, but a number of English capitalists considered that there was an excellent chance of making a good thing out of the development of the Algerian gold mines, and they have floated a concern under the title of the North African Gold Mining Company.

The many discoveries that have been made with the electric furnace and by other means during the past few years include one which is believed by metallurgists in this country to be destined to create quite a revolution in some branches of industry. Glucinium is a metal even lighter than aluminium, over which it possesses important advantages. It has a greater tensile strain than iron, and a higher electrical conductivity than copper, its quality in this respect being about equal to that of silver. It is thus particularly suitable for the manufacture of telegraph cables, in which the risks of breakage would be reduced to a minimum. As glucinium has not been experimented with upon a large scale, it is impossible yet to say definitely whether the laboratory tests will be borne out in practice, or whether it will share the fate of aluminium, which has fallen far short of the anticipations that were at first formed of it. No doubt something more definite will be known about glucinium before long, and if it proves to possess such marvellous qualities of strength and conductivity its manufacture will constitute a very important branch of industry.

A VISIT TO THE GOLD FIELDS ON THE HAURAKI PENINSULA, N.Z.

(BY A CORRESPONDENT.)

THE Northern Steamship Company's boats steam the distance between Queen-street wharf and Grahamstown on the Thames, a distance of some 56 miles, in about 4½ hours. Upon landing, one is immediately struck by what seems to be an unnecessarily long wharf, but a visit at low tide will easily explain the reason. The foreshore is rapidly extending seawards, and although the present wharf has more than once been lengthened, it is already too short to berth steamers except at high water. The Thames township extends about 1½ mile at the foot of a range of hills, or series of ridges and spurs, whose sides are dotted every here and there with driver, at the entrances of which lies the material the human burrowers have thrown out.

To-day there are signs of better times in store for the town, but the presence of numbers of ramshackle and dilapidated buildings tells its own story of a departed prosperity that once cheered the hearts of those who flocked to this land of Ophir. On November 21, 1769, Captain Cook landed on these shores, and after a few hours' stay, during which he collected a few specimens—probably of timber, as he makes mention in his Journal of trees of immense growth—he embarked, after calling the river the Thames, on account of its bearing some resemblance to that river in England. In July, 1867, gold was first discovered in a creek bed at the Thames in pieces of quartz, and on August 10, same year, Messrs. Hunt, White, Clarkson, and Cobby found a rich leader of auriferous quartz in the Kurunui stream. This led to the discovery of large quantities of gold in the Shotover, Moanatairi, Long Drive, Caledonian, and other claims. The dividend from the Caledonian claim in one year amounted to about £857,000. In those days many fortunes were made, which have since either found their way back again into the earth, or been broken against other than gold-bearing rocks. These famous claims are situated within a few hundred yards of the foreshore, on to which the tailings or refuse from the batteries found their way. There they have remained, and to-day they cover many acres to a depth of several feet. Until a few years back, the process known as wet crushing and silver-plate washing was the only one in vogue.

It is estimated that in some cases over 50 per cent. of the gold was lost in the tailings. To recover this there are now on the Thames foreshore two plants of grinding machinery and pans capable of putting through over 200 tons of tailings per week, at a profit. In some cases this waste material has been turned over and over again, and each time paid for the trouble. In dealing with this accumulation of so-called waste material little manual labour is required, owing to the capital supply and pressure of available water-power. The Thames town supply is derived from the Karaka creek, which has been dammed some 16 miles back from the town. For these 16 miles the water flows along a race before entering the cast-iron service main. There is an average pressure of 60 lbs. per square inch available in the town for working batteries and other machinery by means of the Pelton wheel, which has, in most cases, superseded the turbine. From the crushing-house to the particular place where the tailings are being worked an inclined flume or trough is built, with sufficient fall to prevent accumulation of sediment. The banks, sometimes 7 or 8 feet deep, are sluiced with water, the puddle is raised to flume by means of a water injector, and thus conveyed to the pans where it is crushed and then treated by mercury. The further saving of gold has, during the past six years, been greatly facilitated by means of the cyanide process. As the result of a visit from Professor Black to the Thames some six years ago, the School of Mines exists to-day, and is doing a great deal through its teachings and experiments towards the future prosperity of the mining fraternity and the success of the mining interest at large on these fields. In Mr. James Park, F.G.S., and his assistant, Mr. Allen, the school has two very able lecturers and instructors.

The range of broken hills immediately behind the town is not more than 200 or 300 feet in height; behind these other peaks and ridges rise to a level of some 300 or 400 feet higher. The line of depression between the higher and lower land marks the course of what is known as the Moanatairi fault. Speaking of this fault, Mr. Park, in his paper on "The Mineral Resources of the Thames," says:—"It hides or underlies to the south-west—that is, towards the harbour—at a uniform angle of 45°. This seems a very flat angle of inclination for so great a fault, but I have verified it in many places by personal observation and reference to the working plans of the mines situated on its course. Where the fault crosses hard rocks the striations and slickensides on the surface are often as fresh as if the faulting or sliding had only taken place yesterday. The enormous friction and pressure due to the sliding on the walls have crushed and shattered the rocks for a considerable width on each side of the fracture, and caused the formation of bands of stiff impervious clay lying parallel to the original line of fissure.

The whole evidence when taken together seems to point to a very recent origin of this great fault, and I am inclined to put it in the Newer Pliocene or older Pliocene period." During the writer's visit to the Thames and neighbouring fields the weather was so persistently bad that the opportunities of making a close acquaintance with the country lying beyond the first range were limited. As, however, there is great similarity in the general workings of mines, a short description of a visit to the Moanatairi will convey some slight idea of the methods employed in getting the gold-bearing quartz.

Attired in borrowed clothes, and provided with a candle, we entered the main tunnel some 20 feet above the road level, and in face of hill rising from edge of footpath facing the foreshore, accompanied by Mr. Clark, the manager of the mine. The tunnel, which runs north-east and south-west, is ½ mile long, 6 feet 6 inches in height, 7 feet wide at cap, and 8 feet wide at floor. Two lines of tramway are laid, having a gauge of 2 feet 4 inches and 14 lbs. rails. The present company's area is about 90 acres. From the tunnel to the first level is 150 feet; from this to surface of hill about 400 feet. The country through which the tunnel passes is what miners call "kindly," until the line of great fault previously mentioned is passed, hard rock is then encountered. Great difficulties were experienced when the fault face was reached; owing to the water, which poured in through the partition belt of broken rock. The distance between the two levels (150 feet) shows the vertical downward movement of the slide.

The roof of the tunnel is timbered over where the country is soft; green Kauri heart is in favour for this purpose. By the time we reached the top length of the ladder the perspiration was freely indicating that, at this special exercise, we were a novice. Our guide had warned us against looking up on account of the dripping water; one drop finding its way into our optic proved by its burning action the wisdom of his advice. The main reef crosses the tunnel at a very slight angle. The

plan followed for many years has been the prospecting and working of the richer leaders traversing the claim, but when the company have command of capital to prosecute their work on a larger scale, no doubt this main reef will amply repay. At present only some 50 men are working, and there is room for more than twice that number, besides payable ground for four rock-drills. For a description of the gold-bearing formation, an excerpt from Mr. Park's pamphlet will serve better than the words of an amateur miner:—"At the Kurunui or Shotover stream we pass on to the gold-bearing formation of the Thames gold fields, which extends without a break as far as Hope Creek, on the south, and stretches in a north-easterly direction into the upper valleys of Tararu, Puru, and Waioimo streams, where it extends northwards towards Mercury Bay. It is a noteworthy fact that wherever it is found it contains large, well-defined, payable reefs. It consists of alternations of soft, or moderately hard, decomposed andesites and bands of solid hornblende and augite-andesite lavas, which pass imperceptibly into indurated tuffs and breccias. The decomposed andesites generally possess a characteristic yellowish-brown or grey colour, and form the kindly country of the local miners; while the solid andesites and tuffs possess a greenish or dark blue or purple colour, and are generally known as hard colour. These alternating bands of soft and hard rock follow a general north-east course, and from the Kurunui hills to the Waioimara gully, possess a north-east dip, at angles varying from 40° to 70°." On the foreshore, near the Shotover valley, the Thames Drainage Board have their shaft and big pump, which drains to a 500 feet level. If the deep mining of well-known reefs is ever carried out more powerful machinery and deeper shafts will have to be used. There are not wanting those whose opinions are very strong, founded, as they are, on an experience extending over 20 years, who say that the Thames gold fields may be said to be, as yet, only in their infancy; that the surface has but been scratched, and that deep down, even below the sea level, lies wealth that only requires the key of capital to open the doors and let the captive free. To-day the hills facing the sea are quite denuded of their timber, but here and there a tree-root showing above ground tells its own tale. Over the crest of these spurs and ridges, however, there is heavy bush where the note of the Tui may still be heard, whilst the pretty little fantailed fly-catcher pursues his victims with graceful evolutions, as did his ancestors in the days when none but the Maori foot disturbed the stillness of the woods, and before the Pakeha dreamt of the wealth that the rocks have since been made to disgorge. Below and reached by a narrow track lies Tararu creek. Payable ground has been worked here for years, and in these days of renewed mining enterprise, when everybody who knows a good thing, or thinks he does, is pegging out claims, the reefs of Tararu creeks are getting their share of attention.

In the past the history of the Thames gold field has been that of comparatively small-moned companies. The natural consequence was that many claims were abandoned or worked by tributaries and prospectors with varied success. To-day the scene has changed and companies are daily being formed to secure a share of the foreign capital, which at home can find no profitable investment. By judicious selection of ground together with the amalgamation or buying-up of claims about well-known payable reefs, investors should be encouraged to provide that capital which alone is needed to carry these gold fields to a position of prosperity equal, if not greater than that occupied in their early days.

Some 10 miles beyond the Thames township is Puriri, better known from the mineral water which takes its name from this locality—a cold, effervescent water, having valuable properties from the presence of alkaline carbonates; it is bottled both as a still and aerated water—than from its gold. Can any gold come from Puriri? Such is the question asked by men who have known and prospected the country about here as far back as 20 years. Opinions differ as to what the answer should be; but there are not wanting men to-day who have great faith in the future of these reefs, and not only are claims being rapidly taken up, but there is every probability of a share of foreign capital finding its way to Puriri.

Another 10 miles or so brings the traveller to Paerua, a small township which promises to become a flourishing place in a few years should the mining industry in the up-country continue to boom. Having already a water-way to Auckland, and a railway laid ready for traffic, which, in a roundabout way, also has its terminus at Auckland, Paerua will eventually become the distributing centre for a large area of country. The land between the river and the hill is mainly swamp, and would swallow up a deal of capital in draining, although what has been reclaimed is very productive.

No gold has been found in the immediate vicinity of Paerua. Between Paerua and Karangahake there is a pretty good seam of coal, but not of first-class quality. Endeavours are being made to float a company to work this coal. One of the inducements held out to investors is that the value of the coal field must increase as the supply of available fuel for ore-drying purposes recedes further back from the place of consumption. There is some talk of lighting Paerua by electricity, there being an abundant supply of water-power close at hand.

After leaving Paerua behind some 4 or 5 miles, the surrounding country changes. No longer does the stream flow past low-lying land, as in the case of the Thames and Pukekohe, which we have now lost sight of, to follow for some miles the banks of the Ohinemuri, whose waters are tinged and muddy from the solid matter they carry in solution as they hurry along their rocky course, at times dashing themselves against the huge boulders which, perchance, have lain for centuries after being displaced from some exalted position by mighty convulsions, or the slower, but no less sure, agencies of Nature. Before continuing our way on the main road, let us cross the stream and see what is taking place in and about the Waitaiti gorge. A little below the bridge which here spans the river, are situated the battery buildings of the Crown Mine. From this point, high up on the hillside, a tramway has been laid, which, after winding its way round the hill, follows the Waitaiti for about ½ mile or so until the tunnel is reached. Below and on the opposite of the gorge the Talisman and Woodstock Mines have their batteries. These mines are situated on the high ground beyond the boundary ranges of the gorge. Overhead a wire tramway conveys the quartz and fuel down from a height of a thousand feet to the lower level. The Crown tramway has in places been cut into the hillside. Before the mine is reached the track has crossed and recrossed the gorge.

The output of quartz from the Crown Mine is about 400 tons per month, with a value of about £6 per ton. Against this, the expenses run from £1100 to £1200 per month. The Ohinemuri gold field has been open about 17 years. Here the distribution of gold is very different from that in the Thames district; the ore is of a lower grade, but the gold-bearing reefs are very much larger. Given more crushing and extracting facilities, the large though poorer reefs are more desirable. In one case, for every 20 tons of mullock or dirt 1 ton of quartz may go to the mill for £80 or £90; in the other, 20 tons of quartz may crush for £120.

Until a few years ago the old coach road lay further back from the river, missing the present site of the town, and threaded its way through deep and pretty gorges until it came to the river.

Some two miles beyond the junction of the old and the new road is Owharua, where a small battery at work proclaims that the district is gold-bearing. Another mile or two of road by the river's bank and our way lies over a track, or series of tracks, over the scrub-clad country to Waihi. At the time of our visit both road and tracks were billows of mud, in consequence of the heavy rainfall and the amount of traffic caused by the increasing fame of the Waihi and Waitakauri gold fields. One Auckland firm has seven or eight teams of six horses carrying between Paerua and Waihi. At points where the various tracks converge, the ploughed-up road is over 100 yards wide, with an average depth of mud about of 12 inches. The coach ride from Paerua to Waihi, a distance of 15 miles, is an experience never to be forgotten. On the so-called made roads the mud has swallowed up the metalling, and the huge boulders or points of the bedrock betray their presence by violently pitching ill-fated passengers from their seats at the expense of their spinal cords. To our left, at some distance, is a broken range of bush-covered hills whose front rank of blackened and maimed trees stretch forth their naked limbs, mutely protesting against the fire of an advancing army of settlers. To our left nothing can be seen for miles but scrub and ranpo swamp. The li-tree scrub, when seen from a distance, is very deceptive. A stranger viewing the undulating areas of dark green might well be forgiven if he exclaimed—what splendid pasture! and would be surprised to find, on closer acquaintance, perhaps 10 feet scrub. Before us, on a rising ground, is the straggling township of Waihi. Very little can be said in favour of Waihi as a residential place, but a great deal might be said of its condition at the time of our visit. The roads had their winter heavy coats of mud, but we were given to understand that when summer's sun shone these were changed for dust-coats. On the footpath sinners walk on slippery places, and the most progressive Christian runs the risk of becoming a stick-in-the-mud if he essays to cross the road. In answer to a remark concerning the way in which "the severity of the weather pursued its course with incredible tenacity," an old inhabitant told the writer that he first came to live in those parts at the beginning of the wet season, 23 years ago, and he was afraid he would not live to see the end of it. Just beyond, and a little to the left of the present town, rise a few dome-shaped hills. Within a few feet of the surface of this elevated ground the now famous Martha reef lay almost neglected, as the ore was considered to be too poor to work, until a new prophet arose who showed the despairing ones that by a new treatment the previous difficulties in dealing with the refractory might be overcome, the unlimited supply of low grade ore be turned to profit, and that out of what, under the old method, had run to waste, and accumulated near the old battery, and on the bed and banks of the creek, there was wealth which but required the magic touch of chemistry to reveal itself. Two Waihi companies have been in the field and retired before the successful present company, which to-day has 130 head of stamps, each pounding its daily ton or more of quartz, whilst a number of vats 20 feet in diameter are engaged in the cyanide process of saving gold. These vats have a wooden grating fixed at some small distance from the bottom; below the grating a strainer of canvas is placed. The powdered quartz is fed into these vats from elevators, and covered by a strong solution of cyanide of potassium and water, which, percolating through the powder, dissolves and carries off the gold. From the vats the solution passes into receivers, from which it slowly runs through a series of filter chambers filled with zinc shavings, which catch the gold from the solution as it finds its way to the sumps. Lower down the creek is the old Waihi, now the Waihi Silverton battery. From this to the mine three miles of tramway are in course of construction. From all accounts this company has capital stone to work, and plenty of it.

HANNAN'S DISTRICT, W.A. (HANNAN'S REWARD).—The most northerly point to which the main boulder lode has yet been traced is Hannan's Reward Mine, situated 4 miles south-west of the Great Boulder group. This claim, comprising 24 acres, has included within its boundaries the 6 acres pegged by Hannan, the discoverer of this wonderful district. Obtained originally as a reward for finding rich alluvial gold in the locality, it has during the two years which have elapsed since first claimed, yielded a big lot of the precious metal to both Hannan and his successors, and has now passed into the hands of one of the strong English companies which are so rapidly snapping-up all the rich mines of the colony. Like all the mines of the locality, it was originally worked for the alluvial, then for the cement, and, finally, as far as the prospectors are concerned, for the rich gold contained in the quartz veins at shallow depths. The bonanza hidden beneath the surface remained undiscovered, and it is only within the past two months that the immense lode, rich in gold, which is now exciting so much attention, was even suspected of being hidden underground. To the manager of Hannan's Reward, Mr. W. H. Corbould, and his able assistants, is due the honour of discovering what undoubtedly is the northern extension of the Boulder lode. It was first picked up in the main workings of the Reward Mine, but since then it has been learnt that the capping, rich in the precious metal, had also been disclosed by the dry blowers working in the ground owned originally by Hannan and party. The western slope of the hill comprising the mining claim is intersected by quartz veins running east and west into the north and south range. These were first worked on, and it was while opening the mine in a systematic manner and following the veins in the hope that they would lead into something better, that the big lode was discovered. In driving east at the 80 feet level the men broke unexpectedly into a big formation rich in gold. In appearance it closely resembles the big soft silver lodes of Broken Hill, and consists chiefly of decomposed porphyry and quartz. As much gold is visible in the faces as was silver in the oxidized ores of the Barrier, and wherever the veins of iron-tone and quartz occur the faces are simply smothered with the precious metal. The drive was carried through this formation until the western wall was reached, and along this a north drive was put in for a distance of 78 feet. The stone varies in richness in places, but will average several ounces all through. Very little is known about the reef save in the section exposed in the workings referred to, but with a view of testing the continuity of the lode a start has been made to tap it at a point 400 feet farther north. A drift is being run in from Barnfield's shaft at the 80 feet level for this purpose, and by this means a much better idea of it will be formed. It will add enormously to the value of the property as soon as this has been accomplished, and within a few weeks the results of the test should be known. In the meantime, it is rather a pity the work of driving in the lode has been discontinued, even though the work might necessitate a second handling of the dirt brought to grass. The rehandling of such rich material a second time scarcely matters, and by driving and crosscutting in the formation a much better idea of the value of the great body recently discovered could more easily be formed. The sinking of the main engine shaft is being pushed on as rapidly as possible, and a depth of 220 feet has already been attained. This will be pushed down to water level, estimated to be a little over 300 feet, and as soon as it has been accomplished the reef will be tested in the lower levels. It is probable that the method of treatment adopted will be dry crushing by means of Krom rolls, mechanical separation of the rougher particles of gold, and cyanide for the extraction of the fine metal.—*West Australian Gold Fields Courier.*

— On and after the 27th inst. share certificates of the VAN RYN NORTH EXPLORATION AND MINING COMPANY (LIMITED) will be ready for delivery in exchange for bankers' receipts on application and allotment.

MEETINGS OF MINING COMPANIES.

GOLD EXPLORERS, LIMITED.

THE first ordinary (statutory) general meeting of the Gold Explorers (Limited) was held on Tuesday, at the Cannon-street Hotel, under the presidency of Mr. G. F. TAYNOR.

The SECRETARY (Mr. F. W. Sellick) having read the notice convening the meeting,

The CHAIRMAN said: Gentlemen—I have very great pleasure in meeting you this morning—the more pleasure inasmuch as it is to the board's gratification to inform you that the reconstruction and the progress of this company have been a marked success. We have now a clientele of some 250 shareholders, and a capital in hand of £8000, which we anticipate will be £14,000 within a very brief period, as the shares which were unallotted up to a certain point have been taken to the extent I have mentioned. I might say, on the subject of finance, that we think it more than likely that within a short period we shall have a total capital of £42,000 cash in hand, as the 110,000 shares which were reserved are already under treaty for purchase. Now, gentlemen, I need not inform you that those who have so ably responded to our solicitation to join this company must know what they are about when they so actively strengthen our financial position as to give us a very large amount of cash for the purpose of pursuing operations. The next thing that I have to mention is the progress which your directors have made to further those operations, to consolidate the interests of the shareholders, and to increase the value of the shares. We have had some admirable opportunities of acquiring certain properties, and we have selected one property in special in West Australia, on the Premier line of reef—a line of reef which is identical with, and in the same position as, that of the Miner's Dream and other properties of a similar character existing at the 25 Mile post in the Coolgardie range. My attention has been drawn to the financial newspapers of the 17th inst., which state, in regard to the Miner's Dream, that a report has been received as follows:—"The most northern shaft, Miner's Dream, is 90 feet and over deep, making stronger, with fine and coarse gold, and the most southerly shaft, Gladstone Extended is 90 feet deep, reef 3 feet wide, carrying coarse and fine gold, like Miner's Dream. These shafts are fully ½ mile apart, and will give you a little idea of the value of the whole of these leases. The whole of the experts here speak highly of the properties in connection with the 25 Mile." Now, gentlemen, we have secured the option to purchase a property, and not the least important property, in this position. We have secured it on very favourable terms indeed, and we have cabled our agent at Coolgardie to inspect the property and send us a telegraphic report, in addition to mailing his report *in extenso*. So soon as this is done we shall issue the property to the public, and, having credentials such as it possesses of a first-class character, with large possibilities of a very generous return in gold for expenditure, we anticipate that we shall make for our small company a very considerable amount of profit. I may say that the property of which I am speaking has already a reef proved on both sides, so that the inevitable consequence seems to point to its passing through our-to-be-acquired property also. Now, gentlemen, if we succeed in this flotation, we shall have established for our shareholders without doubt a most admirable commencement for both profit-taking and future prosperity. The old saying, "Nothing succeeds like success," will, in our case, have borne great fruit, inasmuch as our shares have been eagerly subscribed for, our capital has been actually determined, and we have been placed in such advantageous connection with certain people that our West Australian ventures may become to this company a very large and a very important item in regard to giving them back a very large percentage for their holdings. In addition to the property contiguous to the Miner's Dream, we already possess, as you are aware, the Bayley's South Consolidated property, which is situated in the immediate vicinity of the Bayley's Reward. Since we acquired this property we have simply carried on operations to the extent of sinking a shaft to prove the reefs at the depth at which they are expected to be struck. This is somewhat slow work, but it is a work which we all hope will eventually make a strike of a good character on this initial property with which we commenced our undertaking. I might add that the policy of your board has been to acquire from friends and connections in the West Australian fields every property of a good and solid character which could be acquired at a moderate and economical outlay, while at the same time we do not purpose entering upon any venture which is not recommended and backed up by people of mining experience on the other side. We have taken an interest, gentlemen, in two or three syndicates which have been brought to our notice, and in the advantages of which friends of ours have asked us to share: but as we have placed only a small amount in these—a mere trifle—at the present juncture I do not think I need dilate upon them. However, small as they are, they possess an eventuality of bringing in a little profit, and so show that we have not been supine or neglectful of the shareholders' interests. I need hardly inform you that when we float the 25 mile property—and present indications seem to denote that so soon as we are ready for the flotation it working capital will become absorbed without very much difficulty—we are not going to limit ourselves to the flotation of one company, but shall avail ourselves of the advantages which this present healthy position of the mining market affords to increase the interests of our shareholders in the most prudent and economical manner, for the purpose of securing the advantages which this very happy period of mining finance appears to assure us. I do not think I need go further into the subject at present. We have met simply to comply with an Act of Parliament, but I have given you, without any exaggeration, the position which we at present occupy. It is a very hopeful one. We do not assure you there is going to be wonderful success, but from the position as it is known to us at the moment we can assure you most truthfully that it presents all the attributes of a very successful start in the life of a new company, and I trust, gentlemen, it will be the duty of the board, as well as its pleasure, to meet you within a measurable period to inform you of the gratifying results of what I have just foreshadowed in my speech to you. (Applause.) If any gentleman would like to ask any question, or elicit any further information, I shall be very glad to respond to the best of my power. There is one thing I should like to add. There was a promise made to the shareholders that we should not go to allotment unless 75,000 shares were placed. As a matter of fact, under these auspices we have placed 95,000, which is 20,000 in excess. (Applause.) That only bears out what I stated just now. In thanking you for your attendance, it only remains for me to wish you a very prosperous and a very healthy competition in the mining boom which is at present raging in England, Paris, and other large centres generally, and I think with very just cause. (Applause.)

Mr. B. W. JONES remarked that no doubt all present were pleased with the statement the Chairman had made with regard to the prospects of the company. He (the speaker) believed it would become a successful company, and he believed that if it were to be so it would be under the present management. If it were not successful under their direction he feared it would not be successful under any other management at all. In conclusion, Mr. Jones proposed a hearty vote of thanks to the Chairman and his colleagues for what they had already done, and he also wished the vote to apply, in anticipation, to what the board would do for the shareholders in the future. (Applause.)

Mr. TAYLOR seconded the motion, and it was carried unanimously.

The CHAIRMAN: We have, in return, to thank you, Mr. Jones, and the other gentlemen present for your kind feeling, and we only hope that our success in this undertaking will show you that we are deserving of it. (Hear, hear.)

Mr. VON BUCH said he might add to what the Chairman had told the meeting—that the board had held no less than from 28 to 30 meetings at which they had considered various schemes, and had

endeavoured to pick out those which would result to the best advantage of the company. (Applause.)

The meeting then closed.

WESTRALIA, LIMITED.

The first ordinary (statutory) general meeting of Westralia (Limited) was held on Monday, at Winchester House, Old Broad-street, Mr. PERCIVAL TIBBS presiding.

The SECRETARY (Mr. Arthur Hebden) having read the notice convening the meeting,

The CHAIRMAN said: Gentlemen—It is not often that the Chairman of a company, at its first meeting of shareholders, when he is called upon to speak on behalf of his colleagues on the board, has so agreeable a task set before him as I have to-day. The first or statutory meeting is usually regarded as an occurrence of a perfunctory nature, and it generally happens that, through no fault of the directors, the Chairman has little or no information to give the shareholders. We, however, are differently situated to-day. This company was, as you are all aware, organised in the early part of last month—the month of August—and since that time we have not let the grass grow under our feet. I may tell you that we have acquired a concession for the exclusive right of supplying electric light and power to the municipality of Coolgardie for 21 years. This concession, we have resold to a company that was formed for the express purpose of taking it over from us, a company called the Westralian Electric Lighting and Supply Company (Limited) with a capital of £80,000, out of which £35,000 was devoted to working capital. This company is fully organised, and has already commenced operations, so as to fulfil the terms of the concession. Not to speak boastfully, we think it is somewhat of a feather in the cap of Westralia (Limited) that so young a company—a company that has not been in existence yet for 60 days—should have had the privilege of conferring upon the township of Coolgardie, which is the centre of the great mining industry of Western Australia, the great advantage of substituting for the present primitive method of lighting the latest mode of lighting that science has so far invented. We have also acquired a mining property in that district, upon which I am free to say, from what I have seen and from the reports that I have read, that there has been more development done than upon any property that has ever been either offered or floated to this date on this market. The reports are everything that could be desired, and we have so far advanced in our labours that we confidently expect to bring this company out before the public within the next two weeks. We have also just arranged the terms of purchase of another valuable property—a gold mining property—and have had guaranteed to us the whole of the working capital that will be required for thoroughly developing the mine upon that property. The whole of the capital of Westralia (Limited), as you probably know, is devoted to, and is absolutely working capital; not a penny-piece of promotion money has been paid or ever will be paid to anyone for the flotation of that company. (Hear, hear.) The company was formed—and whole of the capital now has been practically subscribed—for the special purpose of trading, if I may say so, in valuable properties in Western Australia—that is, buying them and reselling them, or floating them ourselves, as we think best, and as opportunity gives us a chance, upon the London market. That is the policy that your board of directors had to carry out from the inception of the undertaking; that is the policy which they have carried out to the present moment, and which they intend, as long as they remain in office, to carry out. It does not seem to me extraordinary, under these circumstances, that the shares of Westralia (Limited) are quoted at the premium at which they stand this day. I may tell you—perhaps anticipating a question that may occur to some shareholder—that each of your directors, when he took office, subscribed for 1000 shares, and I need hardly add that—knowing what they do, they still hold them, and speaking on their behalf and for myself, I may say that we intend to stick to them, and to the good ship *Westralia*. (Applause.) I shall now be happy to answer any question that any shareholder may wish to ask.

Mr. BUMPUS: Can you give us an approximate estimate of the value of the business that you have in hand up to date?

The CHAIRMAN: Do you mean of the probable profit that would result to this company?

Mr. BUMPUS: Yes.

The CHAIRMAN: I could give it to you, but I don't know whether, if I told you, you might not think I was exaggerating a little. I may say, however, that the estimated profit that has already been made by your board on the contracts for this company comes to very nearly the amount of its capital. (Applause.)

Mr. WALKER said that after the interesting statement made by the Chairman he thought they must all go away with that feeling of satisfaction that most men who invested their money in a venture of this kind liked to have. There was no doubt that Westralia (Limited) was destined to make its mark in the mining market, and he hoped that instead of seeing the shares at the price at which they stood at the moment, they would soon see them standing at double. (Hear, hear.) He wished to propose a hearty vote of thanks to the Chairman and directors for the able manner in which they had directed the affairs of the company up to the present time. (Applause.)

Mr. ANCELL seconded the vote, which was unanimously accorded.

The CHAIRMAN: On behalf of my colleagues more especially, and in a small degree on behalf of myself, I beg to return their and my thanks for the expression of goodwill that has been conveyed to us. (Applause.)

The meeting then terminated.

EMERALD (REWARD) GOLD MINING COMPANY, LIMITED.

An extraordinary general meeting of the Emerald (Reward) Gold Mining Company (Limited) was held on Wednesday at Winchester House, Mr. T. PYKE presiding.

The SECRETARY (Mr. J. Jameson Truran) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—In the circular of July 15 we conveyed to you the contents of the cablegram which had then just been received, intimating that Mr. Stanley was shortly sailing for England to lay before the board a scheme in connection with the company's affairs. The scheme referred to in that communication was, of course, as we now know, the scheme before the shareholders as contained in the circular which accompanied the notice convening this meeting, supplemented by the letter and report from our manager, Mr. Porritt, in connection therewith, which also accompanied the notice. It is almost superfluous to add that the directors, in common with the shareholders, are very much disappointed at the result of the operations on the Emerald property since the company was started. At that time we had every reason to believe that we were in possession of a property which, though small in area, would make up for that objection by its richness, and there can be no doubt whatever that such was the opinion entertained throughout the colony in regard to this property. The result of the working, however, has unfortunately demonstrated—first, that the rich quarry stone has, for the time being, at all events, come to an end; also that the reefs which showed on the surface have not developed in depth into a permanent body of ore. The directors, under these circumstances, were much impressed with the difficulty of the position, in having to face the probability of an expenditure of what might prove to be a large sum of money in further development of a property which even if (which, of course, is by no means improbable) attended with eventual success, would, on account of the small size of that property, practically involve the expenditure of the company's money, perhaps, for the benefit and ultimate profit of the owners of other adjoining properties. When the company was formed, the working capital of

£5000, then reserved, taking into consideration the fact that the company would be provided with a fully-equipped five-head battery, was deemed to be quite ample, having regard to what we then believed to be the reasonable certainty of being able to supplement our resources from the profits to be derived from the stone which we had every reason to believe would be of a rich character, besides being easily and inexpensively won. The want of success which we have so far experienced in this respect is, of course, a source of further disappointment on the question of funds, although, as a matter of fact, we have already informed you, the reserved working capital of £5000 is not only still intact, but we are actually in possession of about £1000 in addition thereto. Since Mr. Stanley's arrival, and referring to the report from our manager, the directors have most carefully considered the proposed scheme in all its bearings, and they have come to the conclusion that the company ought without hesitation to carry it out. As matters stand at the present moment, there appear to be three courses open for consideration. First, to endeavour to dispose of the Emerald property, and, without expending any further capital, to wind-up the company at once. Secondly, to proceed with the development of the Emerald property itself with a view to finding the continuation of the rich shoots as advised by Mr. Molinex. Thirdly, to carry out the scheme as now recommended to us, and the details of which are before you. As to the first of these considerations, you will, probably, agree with us in thinking that it is hardly desirable to discuss it, and if the choice must be—as the directors think it is—between two and three, every consideration seems to point to No. 3 as being the wisest one. Even, therefore, on the assumption that our principal operations were to be confined to a development of the Emerald Mine, it would certainly be wise to take this opportunity of securing so much of the adjoining ground while it can be secured for so small a consideration. On the other hand, our manager recommends these other properties to us in very strong terms as being able to supply us, without difficulty, with large quantities of ore, easily won, and which offer a good prospect of immediate profit, while we should be in the possession of a considerable quantity of ground, some of which may, in all probability, hereafter become of considerable value, and we can thus leave to a more convenient time the further development of the Emerald Mine, when, after the opening of railway communication, deep sinking operations will be able to be conducted with much less expense than is unavoidable under existing conditions. Mr. Porritt recommends this proposal to us unhesitatingly, and in a very confident manner. Being on the spot, he has had opportunities for months past of continual and close examination of these properties, so that the opinions he himself has formed are not those of any hurried or cursory inspection, but the result of most complete knowledge extending over a most considerable period. It may be asked, on the assumption that these further properties are acquired as proposed, how are the directors situated in regard to means, not alone for the acquisition of the properties, but also for working them? The actual acquisition of the properties will not be very serious; but, of course, the acquisition of so much extra ground will necessarily, to some extent, increase our working expenses, and we must be prepared to spend money in systematically developing them. Then, again, the battery now at the mine is not large enough to procure a satisfactory profit in dealing with ore of ordinary grade of richness; so that the advice of our manager to increase the battery is such as the directors would naturally expect, and would have at once occurred to them as necessary so soon as we are sure that we have large bodies of payable ore to treat. What is of course a difficulty is, that it is impossible at present to estimate, with any exactitude what amount of money we may require to spend in development, as also what amount of profit we may derive from the treatment of the ore which appears to be immediately available. The board think it only right, therefore, to take this opportunity of pointing out to the shareholders that, while on the one hand we are in no immediate want of funds, it may be possible that at a later stage we shall find it necessary and desirable to raise further capital. So far as a rough estimate could be formed, the directors have calculated in regard to the scheme that their requirements might amount to some £12,000, or thereabouts. Towards this we have already £5000 in hand, which will carry us a long way, and, as already mentioned, we may, as events proceed, derive profits which will place us free from any financial difficulty. Taking all these circumstances into consideration, the board, therefore, do not consider it desirable at the present juncture to do anything further than draw the shareholders' attention to the possibility of further capital being required, as a necessary consequence of acquiring these further properties. I now beg to propose:—"That the board of directors be empowered to deal with the proposal put before them by Mr. Porritt, as they deem advisable." (Applause.)

Mr. J. H. STANLEY (one of the vendors) seconded the resolution. He first dealt with the fact of the results obtained having fallen short of the directors' expectations, and then proceeded to refer to Mr. Porritt's scheme. That the reefs were on the property he (the speaker) could vouch, as he had been repeatedly over the ground, and that they carried nice-looking stone he could also assert. Mr. Porritt stated that 5 dwts. would pay the cost of treatment, and if they got 10 or 15 dwts. would mean a handsome profit, and a profit that would continue for many years, so far as present indications were concerned; and there was always the possibility of finding a rich lode at any time, which would very materially alter the aspect of affairs. One feature, too, to be borne in mind was the fact that this gold field would shortly become a most important one as soon as the railway was completed. This should be in about nine months from the present time. The Government evidently had faith in the future of Yalgoo, and they had not hesitated to spend money in constituting it a separate gold field. Before leaving for England he laid the scheme before the local directors, Messrs. Parker and Venn, and it met with their approval, and a formal minute to that effect was sent home to the directors. Mr. Stanley continued: Assuming, therefore, that you decide to acquire these properties, the next step will be to thoroughly develop them before ordering our machinery. To do this will probably take six months, and if during that time we have an opportunity of disposing of any of our land at a good advance, or letting it on tribute, the matter will be placed before the board for consideration. In six months' time the railway will be so far advanced that a considerable saving will be effected in the cost of transit of machinery, and we shall have a quantity of ore all ready for treatment. With 40 head of stamps we could easily calculate on crushing 500 tons a week, and if we recovered 1 ounce, at a cost of £1 per ton, that would leave us a clear gain of about £750 a week, or £3000 per month. Mr. Porritt, you will notice, estimates that the ore will yield 1 ounce; but if we reduce his estimate by half, that would still leave us a profit of £2000 per month. I know how disappointing all estimates are, but it appears as if we have some margin here to come and go upon; and it is well known that the most successful mines in the past have been those that had low-grade ore to deal with, so that we may within twelve months find ourselves in a very strong position, and our shares quoted at a substantial premium. I would also remind you that we have still a large quantity of surface rubble to treat on the Emerald, and if this is done in a systematic way it should give excellent results. We have also about £7000 worth of tailings to re-treat, part of which assayed nearly 3 ounces to the ton, so that we can still go on earning gold to stand against our outlay for developing the other properties. Mr. Porritt intends, with this object in view, to make the utmost use of the present machinery.

After a brief discussion, the resolution was carried unanimously, and a vote of thanks to the Chairman and directors closed the meeting.

JACKSON GOLD FIELDS.—The gold mines owned by the Jackson Company, covering an area of 90 acres, have been developed by extensive workings, and at the 200 feet level, we are informed, a new large body of ore has been struck in going down on the lode. The gold is free milling, and the ore easy of treatment. We are also given to understand that the plant already on the property is ample, comprising a 60 stamp mill and all necessary machinery, which is driven entirely by water-power, of which there is an unlimited supply.

WITPOORTJE GOLD MINES, LIMITED.

The statutory meeting of the Witpoortje Gold Mines (Limited) was held on Thursday, at Winchester House, Mr. THOMAS WILKINS, C.E., presiding.

The notice convening the meeting having been read by the SECRETARY (Mr. Charles H. Goodman),

The CHAIRMAN said: Ladies and gentlemen—This is our first or statutory meeting, and, as a rule, shareholders are called together in conformity with the Act of Parliament, and simply told by the Chairman that there is nothing to report, except that the company went satisfactorily to allotment, and the meeting is at an end. I should, however, like, with your permission, to give you some particulars of your property, and sketch the policy of the board, so that you may better understand the reports which will be issued to you from time to time, as the development of the property proceeds. You are aware our mines are only about 18 miles west of Johannesburg, that two good roads run close to or through the property, and that we are within 5 miles of the railway, very important features in the development of a mine; further, coal can be delivered on the property at about 20s. per ton; and last, but not least, we have a splendid water supply for all mining and milling operations which we may desire to carry out. We have what is known as a Main reef property, as I shall show you from the reports of the experts who have visited our and other adjoining properties. Three well-known mining men of the Rand have reported upon this property, and all three are unanimous in considering the claims very valuable. By-the-way, I ought to say the company owns 53 claims in one compact block, to the south of which is the farm Vlakfontein, and to the east the farm Roodepoort; on the latter farm the well-known mines Durban Roodepoort, United Main Reef, Princess Estate, and Banket are situated; the Kimberley series of reefs have been exposed on the south of our property by trial shafts and cuttings, showing reef matter from 1 foot 6 inches to 4 feet wide. This series of reefs Mr. Gluyas, the late manager of the Nigel Gold Mining and Heriot Companies, who reported on the property, says are always found south of the Main reef series. He says, "In going over the ground I plainly saw both of them." Mr. J. Tonkin, late manager of the Heidelberg Roodepoort Gold Mining Company, also says that "I am firmly of opinion that the Main reef runs through the block of claims under report, and further, that the reef dips right through the block." Speaking of an adjacent property, the Robinson McKinlay, he says:—"The main reef has already been struck on this property, a short distance to the north-east of the property under report, by means of a diamond drill, and a shaft is being sunk here at the present time;" and in concluding his report he says:—"Having regard to the indications that I have pointed out, I am fully convinced that this is a very valuable property." Another gentleman who reported upon the property, Mr. J. Dunneachie, says: "All the boundary ground is gold-bearing, that to the immediate south being the now famous Randfontein." He further says: "I know this district well, and I can assure you that it is one of the most promising on the Witwatersrand;" and, further, "I have not the slightest hesitation in recommending this as one of the good mining propositions that have been submitted to me lately, and it should yield a handsome return in gold. I am confident it will prove to be a most valuable venture for the company that takes it in hand." I have merely given you the essence of what our experts say as to the property; but any shareholder who desires it can have copies of the reports referred to by applying to the secretary. I think I have said enough, however, to show you that it is the unanimous opinion of these three gentlemen that we have a Main reef property, and a very valuable one, too, and that we have all the elements within reach to enable us to make it a good paying mining enterprise. I don't think it will be detaining you needlessly if I just say, for your further information, that these experts are corroborated as to the Main reef running through the property by three others who reported on an adjoining block of claims (the Vanderhoff), which will be seen by referring to maps to be immediately adjoining our claims. Those three gentlemen are Mr. W. C. S. Hall, manager of the Champ D'Or Deep Level Gold Mining Company, Mr. John Farrant and Mr. J. S. Bowles, and they are unanimous in saying the Main reef runs through the property. I think I have told you all I can as to the value and position of the property, and I should now like to say a few words as to the policy of the board in developing it. What we intend to do is, first to open up and develop it, then to erect the machinery. In this policy we believe we have the shareholders with us, as we shall by this means have ore to crush before we erect our crushing plant. It would be unwise to do as some mines I could mention have done, and get the mill erected before they have any stuff to supply it with. The directors have the fullest belief in the value of your property, and that it is only a work of time to enable them to develop it in such a manner as to be amongst the best dividend-paying mines of this, one of the richest gold fields in the world. I need hardly say if any gentleman desires to ask any question I should be pleased to answer him to the best of my ability.

Mr. G. H. HOSKINS (director): When asked to join the board of this company I was naturally anxious to see what reports were issued from the experts—reports, a summary of which you have heard read this morning. One of those who has reported is well known to me, Mr. Richard John Gluyas, late manager of the Nigel Company. I knew him in Cornwall, and also in Johannesburg, and can safely say that any statement which that gentleman makes upon mining matters, at least so far as his judgment goes, can be relied upon. As to his judgment, I do not think there is any man on the Rand whose reputation stands higher than his. He believes in the property, and he would not speak as he has done if he did not. You will have gathered from his report that the Main reef runs through the property of the Witpoortje Gold Mines. I have some little knowledge of these reefs, and the Main reef and the Kimberley series, and having had a look at the plans, I quite corroborate, so far as my experience goes, the reports which have been issued by these gentlemen, and I fully believe that we have a very valuable property. I have no doubt that in the course of a very short time after development we shall have tangible evidence that the property we possess will be equal to some of the best on the Rand. I hope that time will not be very long distant, and that we shall reap a valuable harvest from our connection with this property. (Cheers.)

Mr. LAVENDER: I should like to move a resolution, which I am sure will meet with the cordial assent of every shareholder present. We have been treated to what in these days is very much appreciated—that is, to a concise statement as to the business position of the matter in which we are all deeply interested. It is at times necessary to go into precise details, and at others to present a precise statement, but the latter is the one which best serves our purpose to-day, and we have had it. You, sir, have given us reason to go away with a conviction that the confidence which induced us to subscribe to the capital of this company was not misplaced, but that it will shortly yield a satisfactory return. I will imitate your example of brevity, and simply move a vote of thanks to you for your explicit and able statement.

The motion was seconded and carried unanimously.

The CHAIRMAN: Gentlemen—I am very much obliged to you for this cordial vote of thanks. I hope that when I have the honour of addressing you upon a future occasion I may be met by you just as cordially as I am now, and that nothing may have transpired to cause you to remove your confidence from your directors, and that you will be equally satisfied with what we shall then have done. (Cheers.)

LILLOOET, FRASER RIVER GOLD FIELDS, LIMITED.

An extraordinary general meeting of the shareholders of the Lillooet, Fraser River and Cariboo Gold Fields (Limited), was held on Wednesday, at Winchester House, Old Broad-street, E.C., for the purpose of increasing the capital of the company, appointing additional directors, and altering the Articles of Association.—Mr. R. M. HORNE-PAYNE presiding.

The SECRETARY (Mr. Edgar A. Bennett) having read the notice convening the meeting,

The CHAIRMAN said: Gentlemen—I very much regret that there are not more of our directors present, but the other members of the board are, as you know, resident in British Columbia. Some of them have been over here recently, but they have had to return, especially Mr. Barnard, in order to look after the company's business. I am aware that many of you have been taken by surprise at being called here to-day for the purpose of increasing our capital to such a very large extent as that of which we give you notice in the summons to attend the meeting. I am also aware that some of the newspapers have criticised the amount of new capital which we ask you to give us as being out of all proportion of the old capital, and unreasonable in the absence of detailed figures, and, moreover unreasonable inasmuch as the new capital required is more than should be prudently expended on properties which we have acquired with the old. I am here to-day for the purpose of giving you the detailed figures which these dissatisfied shareholders have asked for, and of explaining to you in detail the reasons why your board have considered it desirable to so largely increase the capital, and I trust and feel confident that before I sit down, these very shareholders who came here for the purpose of opposing our resolutions, will have made up their minds to give us their hearty support. Since the formation of this company your directors have energetically carried out the objects for which the company was formed, and which we described in the prospectus. In the first place, we were so fortunate as to secure the services of Mr. D. T. Hughes as mining superintendent, a gentleman of great experience, bringing with him the very highest recommendations, and a most successful record from California. Your directors have already experienced the benefit of his excellent judgment, and feel that under his guidance the company's mining operations will be economically and successfully continued. Meantime your company has obtained possession of all the properties mentioned in the prospectus, with the exception of one lease, with regard to which, after very careful investigation and the sinking of further shafts, Mr. Hughes reported that the prospects did not warrant the expenditure of capital necessary to work it, but advised, if possible, obtaining from the same vendors certain other properties of theirs in the immediate vicinity, and found more valuable. This has been successfully accomplished; the new properties have been thoroughly and carefully examined, investigated, and proved, and so far promise exceedingly well. From week to week Mr. Hughes reports on both more and more favourably. One appears to be a valuable gravel gold mine, and the other consists of two claims on a gold quartz reef, which assays an average of 2 ounces to the ton, free gold, and which, owing to its convenient location, Mr. Hughes says can be worked at a cost of not more than 25s. per ton by the ordinary crushing process. The value of these properties was practically ascertained by Mr. Hughes before their acquisition, and his opinion has since been amply justified. Whilst developing with all possible energy the Lillooet properties, your board have also devoted their energies to prospecting and the examination of claims and mines throughout British Columbia, and have succeeded in securing several very promising properties, which have been developed, assayed, and sufficiently proved to amply justify their being worked on a large scale. They have been mostly acquired on the principle which your directors have adopted throughout, and believe in adhering to, that is, without the payment of any cash, but by giving the vendors a reasonable interest in the future profits of their respective properties, or, in some cases, paid-up shares in this company. Your directors have selected six of these properties as being the most promising. They consist first of a property comprising six mineral claims, or 240 acres, on which a shaft has been sunk 400 feet deep, and which is tapped at the bottom by a tunnel 650 feet long. Drifts and crosscuts have been run on the 50, 100, and 200 feet levels, exposing about 26,000 tons of ore, valued at £8 per ton. 300 tons of this ore shipped to the Selby Smelting Company at San Francisco yielded a gross return of £12 per ton. This property has the great advantage for working of being situated within a few yards of the main line of the Canadian Pacific Railway, and, though not of a very high standard, the ore is so easily treated that it ensures an excellent return. In addition to its being on the railway, there is an excellent market for the ore pending the erection of milling and smelting works of our own, as there is a first-rate market for this quality of ore amongst the milling and smelting companies of the United States and Western Canada, who send their agents up to the mouth of the mine and buy it there at a price per ton which will yield a handsome profit to your company. During the course of our development and investigation works there has been extracted, and there is at present on the dump, something like 2000 tons of this ore ready for market. The second property which your directors have selected is one comprising four mineral claims of 72 acres. The reef has been proved to a depth of 100 feet, and is 22 feet wide at that depth. Altogether about 1000 feet of tunnelling and drifting have been done on the property. Especial care has been spent on testing this, and over 40 different assays, milling tests, &c., have been made. The ore taken from wall to wall, and without selection, under the personal superintendence of your vice-Chairman, yields about 1 ounce (17.01 dwts.) per ton in gold, with traces of silver. The tailings are easily concentrated, and can be readily treated by the cyanide process. From tests made by the Cassell Gold Extraction Company an extraction of 95 per cent. of the assay value is certified to. Mr. J. Champion was appointed by the Government of British Columbia to investigate this property on behalf of the Department of Mines, and reported that the quantity of ore in sight was at least 100,000 tons, and the average assay value on 16 tests gave 1½ ounces to the ton, while 100 lbs. of unselected ore treated by a milling test demonstrated that, properly handled, the ore would yield about 13 dwts. per ton, at a cost of 8½ dwts. for working expenses. The third property selected by your directors is a mineral claim of 40 acres on a gold quartz reef, on which a shaft of 100 feet has been sunk and crosscut at the foot, by which the reef has been proved to be 10 feet wide, and of an average value of 18 dwts. per ton. The fourth property comprises a mineral claim with certain exten-

stions granted under the law of British Columbia, about 80 acres in all, upon which a tunnel of 100 feet, with a crosscut of 50 feet, has been sunk, showing a well-defined fissure vein $7\frac{1}{2}$ feet wide, giving an assay average of $1\frac{1}{2}$ ounces to the ton. Of this the British Columbia Gold Commissioner for the district says in his report:—"This claim shows the best defined quartz yet discovered in the district, and is $7\frac{1}{2}$ feet wide. The extensions are also well defined, and have been uncovered near either end of the location, which represents a considerable amount of work, but entirely proves the continuity of the reef." The fifth property is one containing three mineral claims of 120 acres, upon which a considerable amount of work has been done, showing the property to be of a high grade gold and copper bearing reef, from which 16 tons of ore shipped to the Chicago Copper Refining Company resulted in a gross product of 0.368 ounces of gold, 200 ounces of silver, and 7566 lbs. of copper. The Chicago Refining Company, in commenting upon this shipment, stated that the ore was of a very high grade, but that it had not been properly sorted, and contained a great deal of gangue rock which should not have been included in the shipment, and if omitted, would have increased the grade materially. Your directors have reason to believe that this property will very likely turn out to be one of the richest on the American continent. It has been proved to be of enormous extent, and there is a free market for the ore in its present condition at the mine's mouth. The smelters of Chicago, Helena (Montana), Seattle (Washington), and other places are anxious to secure it. The sixth and last property selected is a leasehold of about 1000 acres granted by the Government of British Columbia of auriferous gravel deposits, upon which there are a great number of old workings, the result of the labours of hand washers, and which have evidently yielded gold in early days to the crude processes then available. This ground has been sufficiently tested to show the value to be not less than 50 cents to the cubic yard, and a small investment of capital in the erection of a monitor, and a comparatively small amount of fluming, is necessary to make it a paying property. Four of these properties have been acquired by the formation of subsidiary companies under the law of British Columbia, in which the vendors and discoverers, who are the local miners, will receive a reasonable proportion of the stock, in consideration of your company finding the capital to develop the mines if, and so far as, they think it desirable. With regard to two of them, in the development of which the discoverers had already expended over £7000, and which could not be obtained on the above terms, a provisional agreement has been arranged by your directors to purchase them for £7000 in the fully paid shares of your company, should the extension scheme which we propose be duly passed. At the present moment a gold boom is raging; miners are rushing into the country in thousands, and the attention of the world is being drawn to the vast mineral wealth of the country that is being brought to light. Our company, fortunately in the field 12 months before the rest, and assisted by the energetic and loyal efforts of its experienced British Columbia directors, has prosecuted its efforts with eminent success, and we believe we have secured some of the most choice properties that have yet been brought to light in this Province. We have also every reason to believe that with our organisation secured in the capital which we ask you to authorise us to arrange for to-day, assisted by the sympathy of the people, and aided by the support of the Legislature of British Columbia, we shall be able to continue the successful exploration and exploitation of this vast field of mineral wealth. Amongst those who have recently issued a report of the investigations of the country stand forward prominently Professor Sir G. M. Dawson, K.C.M.G., F.R.G.S., Director-General of the Royal Geological Survey of Canada, and Mr. John B. Hobson, one of the most prominent experts of the West, who were selected by all the great mining companies of the Western United States to represent them before the United States Congress, at Washington, on the mining question. Professor Dawson says, in a paper read before the Royal Colonial Institute:—"The Cordilleran belt, or Rocky Mountain region of North America, forming the wide western rim of the continent, has, whenever it has been adequately examined, proved to be rich in the precious metals as well as in other ores. This has been the case in Mexico and in the Western States of the American Union. Though some parts of this ore-bearing region are undoubtedly richer than others, generally speaking it is throughout a metalliferous country. There is no reason whatever to believe that the particular portions of British Columbia now, for the first time, opened to mining by means of the Canadian Pacific Railway are richer in ores than other parts of the Province. On the contrary, what has already been said of the Cariboo district affords *prima facie* evidence of an opposite character. The Province of British Columbia alone, from south-east to north-west, includes a length of over 800 miles of the Cordilleran region; and, adding to this the further extension of the same region comprised within the boundaries of the Dominion of Canada as a whole, its entire length in Canada is between 1200 and 1300 miles. This is almost identical with the whole length of the same region contained within the United States, from the southern boundary with Mexico to the northern with Canada. Circumstances have favoured the development of the mines of the Western States of the Union, but it is, as nearly as may be, certain that the northern half of the similar region will eventually prove equal in richness to the southern, and that when the mines of these western States may have passed their zenith of productiveness, those of the north will be still increasing in this respect. The explorations of the Geological Survey of Canada have already resulted in placing on record the occurrence of rich ores of gold and silver in various places scattered along the entire length of the Cordilleran region in Canada, and though so far as we have to chronicle only an awakening of interest in the southern part of British Columbia, these discoveries stand as indications and incentives to further enterprise to the north. While the remote and impracticable character of much of this northern country places certain obstacles in the way of its development, on the other hand the local abundance of timber and water-power in it afford facilities unknown in the south, which will be of importance whenever mining operations have actually been set on foot." Mr. John B. Hobson, in the course of his speech before the Chamber of Mines in San Francisco in December, 1894, said:—"I have seen in British Columbia, included in only the three districts of Lillooet, Fraser River, and Cariboo, three times the area of auriferous deposits that are known to exist in the whole State of California. I do not hesitate to predict that the day is not far distant when the gold output from British Columbia will astonish the civilised world." The directors have succeeded in obtaining the guarantee of amply sufficient capital to work your present possessions, and they have also succeeded in obtaining perhaps the strongest financial backing which it is possible to have in all Europe. Amongst the new directors whom we ask you to elect to-day will be seen the names of certainly two of the best known European bankers and financiers. They need no words from me to recommend them to your favourable consideration. The position of the company which Mr. Rosenheim directs, or assists to direct—namely, the Anglo-French Exploration Company, and his equally successful connection with other companies, have proved an ample introduction for his name on the British market. Baron de Machiols' name is

sufficiently well known throughout Europe to make it unnecessary for me to refer to him. In Dr. Goldschmidt we have a scientist and a geologist of the very highest order, and in Mr. Forbes George Vernon, the present representative of the British Columbia Government in this country, to whose zealous and indefatigable efforts as Agent-General we largely owe the fact that we ever came to consider the extension of our enterprise, and the development of British Columbia resources, and who was for seven or eight years Minister of Public Works in British Columbia, we have one of the very first men of local experience and judgment. But if amongst our new directors we have men of great financial position and name, I can assure you that they are merely types of the gentlemen who have put together their money to subscribe our new capital, and there are many other names on the list of equal celebrity. When your directors had made up their mind that it was for your best interests that we should extend our operations on a large scale, they consulted their brokers in London and in Paris as to how this might best be done, and your brokers organised a syndicate to guarantee new capital, in which they themselves, showing their good faith in the enterprise, have taken a very large share, and in which your directors have also taken a very large share. I wish particularly to draw your attention to this fact. You will at once realise that it would practically have been impossible to carry through the scheme if your directors had not come forward and shown their confidence in it by putting their hands into their pockets in no mean way, and I may tell you that one of your new directors has subscribed £30,000 of the new capital, another one has subscribed £20,000, whilst I myself have induced my firm and friends in this country to put up £40,000. I do not mention this with a desire to advertise the fact, but because there is an option attached to this subscription on the same lines that have already been adopted by the great British South Africa Company, and because we hope that when in twelve months this option matures, by our efforts we shall have made the shares of your company worth perhaps £4 or £5 a-piece, and I do not wish you to be able then, or even to think, then, that we had been guilty of a breach of our trust in making a profit out of the shares of the company. I wish you particularly to note the facts in connection with this matter, and to note them well and for good and all, and I may add that if any shareholder here would like to take part in guaranteeing the subscription of capital, it is not too late for him to do so, and if he will call on me after the meeting, I will arrange for him to have as large a share of this responsibility, with its contingent reward, as he desires. The syndicate will be managed by your company's Paris financial representatives, the senior member of whose firm is proposed as one of the new directors, and they are prepared to guarantee the subscription of half of the new issue—namely, £100,000, if it should not be subscribed forthwith by the present shareholders, on condition of the syndicate having for one year the option of taking at par the remainder of the new issue. These are practically the same lines already adopted by one or two of the most celebrated and successful South African companies, and I am confident that the shareholders to-day will feel and agree with me that they are fair and reasonable terms. Owing to the important increase in the business which it is proposed your company should undertake, we feel that we should have a larger directorate, and we therefore ask you to increase the number of directors from five to nine. We also ask you to ratify the action of your board in negotiating with Mr. Frank S. Barnard, M.P., to act as managing director of this company, and take charge of its executive affairs in British Columbia, at a salary of £1000 per annum. I feel sure that the shareholders will not only not hesitate, but they will congratulate themselves on the opportunity of electing and securing the services of men of such calibre and European reputation as those to whom I have already referred as being proposed as the new directors. I am sure also that the shareholders will feel that it is only just that we directors, who have hitherto acted for you with no salary or recompense whatever, saving only the large interests which we have in the shares of your company, should ask for some definite remuneration henceforth, considering the fact that we shall now be called upon to give a great deal of our time and our very best services to the direction of a large enterprise. I shall therefore ask you to vote a resolution granting us a minimum salary of £200 each per annum. As this in itself will be a very small recompense for the time and work which we shall be called upon to give to your affairs, we shall ask you to give us, to divide amongst us, 10 per cent. of all the profits we shall make for you, after a dividend of 10 per cent. cumulative, has been paid on the shares. In conclusion, I may say your directors consider that the company now embraces every element of success and every element necessary to enable it to become one of the great enterprises of the day. It has a vast field of practically unlimited mineral wealth, the sympathy and support of the Province, great railway facilities ample and cheap water, coal, timber, and labour, an invigorating and good climate, ample capital for its present necessities, and a directorate containing some of the most experienced and successful local men, whilst from the powerful financial connections represented on its board, it has the assurance that it will always have ample means at its disposal to continue successfully its operations. Finally, your directors have reason to believe that the Legislature of British Columbia, being fully aware of the keen competition of other countries to secure capital for the development of their industries, will recognise the efforts of this company to open up the mineral resources of the Province, and extend to it every encouragement and legitimate assistance. I trust, gentlemen, that when the time again comes round to have the pleasure of meeting you, assembled together here, which will be at no very distant date, I shall have the gratification of asking you to vote the payment of a substantial dividend on your shares. I shall now be very happy to answer any questions which any shareholder may wish to put to me, and shall then proceed to move and explain the resolutions which we ask you to agree to to-day. (Applause.) On the Chairman resuming his seat no questions were asked, and he expressed the gratification of the directors at the confidence the shareholders had shown.

The CHAIRMAN then moved the following resolutions, which were seconded by Mr. R. NORTHALL-LAURIE, and carried unanimously:—

1. That the capital of the company be increased to £300,000 by the creation of 250,000 shares of £1 each.
2. That each of the present shareholders and warrant-holders shall have the option to be exercised by him or her on or before 12 o'clock on the 25th day of September next, of subscribing for and having allotted to him or her for payment in cash, by such instalments as the directors may determine, such a number of new shares in the company as such shareholders or warrant-holders may think fit, but not exceeding two new shares for each share now held by such shareholder or warrant-holder.
3. That the directors, having reported that a syndicate in Paris, which had been organised by the company's brokers, and in which the directors of this company and the brokers had taken a considerable share and which will be managed by the company's Paris brokers (the senior member of whose firm is proposed as one of the additional directors) had offered to guarantee the subscription at par of £100,000 of the new issue, if it should not be subscribed by the present shareholders or warrant-holders, upon having the option for a period of one year of taking at par a further £100,000 of such increased capital, it is resolved that the directors be and they are hereby empowered to enter into an agreement with the syndicate to carry out such arrangement.
4. That, subject to the following resolutions, Nos. 2 and 3 the new shares

shall be under the control of the directors, who may allot or refuse to allot or otherwise dispose of such shares to such persons on such terms and conditions and at such times as the directors think fit.

5. That the board of directors of the company be increased to nine, and that the Honourable Forbes George Vernon, Agent-General for British Columbia in England; M. Henri Rosenheim, Jules Baron de Machiols, Dr. Jules Goldschmidt, all of Paris; be and they are hereby appointed to act as directors of the company in conjunction with the present directors. The remaining resolutions were for making various alterations in the Articles of Association.

Mr. NORTHALL-LAURIE: I have to report that the board received with regret the resignation as a director of Mr. Edgar Robson. We proceeded to elect in his place Mr. Horne-Payne, and I must ask you presently to confirm his election. Mr. Horne-Payne has frequently visited the properties of the company, and therefore speaks with experience and knowledge of them. It is owing to the great interest he has taken in the company, and the work he has done, that he has got together this powerful syndicate of foreign and English financiers, which enables us to come to you in the very strong position in which we are to-day. I beg to move the confirmation of the election of Mr. Horne-Payne as a director.

Mr. McALIFFE seconded the resolution, which was carried unanimously.

The CHAIRMAN: Gentlemen—I thank you very much for confirming my election as a director of this company. I shall certainly devote my best energies to carrying it to a successful issue. I thank you also for your kind attention to-day, and for the confidence which you have shown in the directors by the unanimous way in which you have voted these resolutions.

Mr. MITCHELL INNES moved a vote of thanks to the Chairman, which was seconded by Mr. WILLIAM VERNER, and carried. The CHAIRMAN briefly acknowledged the compliment, and the proceedings terminated.

AFRICA TRUST, LIMITED.

The first ordinary general (statutory) meeting of the Africa Trust (Limited) was held on Wednesday, at the Cannon-street Hotel, under the presidency of Mr. H. RIDER HAGGARD.

The SECRETARY (Mr. Lancelot C. Walton) having read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—You are aware that this is the statutory meeting of the Africa Trust (Limited), which under the law we are obliged to hold within four months of registration. The meeting being a formal one, you will not expect your directors to enter at great length into the affairs of the company on this occasion, still it may interest you to know that the position of your company is strong. According to an estimate, based upon the current market values of securities held by the company, it has during the three months, more or less, of its existence earned profits amounting to over 30 per cent. on the total issued capital of £50,000, presuming the same to be paid in full, and of these profits a proportion is realised. But about a half only of this capital of £50,000 has at present been paid up in full, so that the real earnings of the company, estimated on the market values of its holdings, amount to-day to nearer 70 per cent. than 30 per cent. (Applause.) If, however, in view of a possible fluctuation of markets and alteration of the value of securities, we deduct from this profit of 30 per cent. a proportion of one-half, it is obvious that our position still remains satisfactory, and one that gives promise of a good return to us all as shareholders. We can also inform you that the company has other important business in view, notably the securing of a concession, towards which your directors have taken active steps, wherein, should it be obtained, as we have reason to hope will be the case, the value of the interest of this company ought to amount to a very large sum indeed. For obvious reasons, I am sure we shall not be expected to say any more of this matter at present. In conclusion, we may mention that we are negotiating with Paris firms of standing with the object of placing a portion of our reserve capital in the hands of French investors, a course which we believe will prove of great benefit to the company at large. We wish to add that since the formation of our board Sir Melmoth Osborn, K.C.M.G., has joined it as managing director. We think that the company has cause to congratulate itself on securing the services of a distinguished gentleman so eminently fitted by his life-long knowledge of Africa and its affairs, to fill their managing directorship. Further, the Marquis de Beauvoir and Mons. Posno, two gentlemen well known in French financial and other circles, have joined the board as directors in Paris, and by their advice and local knowledge have already given much assistance to your directors. If any shareholders require information upon any matter we shall be very glad to give it, provided that so doing does not interfere with the interests of the company. (Applause.)

Major COTTON: I should like to ask you the number of shareholders that we have in this company.

The CHAIRMAN: The secretary informs me there are 184. Major COTTON: I would also say—though it is a matter that rests with the board—that I personally always prefer that the shareholders should have the first offer of additional shares when they are issued, because they are usually issued at a price that is remunerative, and I rather object myself to outsiders being brought in when, in my opinion, the original shareholders should have any benefits that accrue from the extra issue of shares. I think their claims ought to be fully considered by the board. I do not wish to insist on this, because no doubt the members of the board are large shareholders, and our interests are their interests; but I only mention the view—and it is a strong view—which I take in matters of this sort.

The CHAIRMAN: I am sure we on the board sympathise with what you say, but the matter has a somewhat different appearance when we consider the placing of capital on the French market. It is obviously very much to the interest of every company to secure the support of French investors, because, as you are well aware, the French investor is rather different from the English investor in a way. As a rule, what he buys he puts away and keeps, and that a considerable proportion of the shares of the company should be held in that manner must be, I am sure, to the advantage of the company at large.

Mr. HENRIQUES said that although the meeting, as had been explained, had only been called for the purpose of complying with the requirements of the Act of Parliament, the Chairman had made a very interesting statement. The thanks of the shareholders were certainly due to the Chairman and his co-directors for what they had done in the very short time during which the company had been in existence, and also, he thought, from what it appeared they were going to do in the future, and he therefore begged to move that such a vote be accorded. (Hear, hear.)

Mr. READ seconded the resolution, which was carried, and the CHAIRMAN having briefly replied, the proceedings terminated.

AN AMERICAN COPPER MINE ON FIRE.—The town of Houghton, Michigan, was the scene on Saturday of a terrible mine disaster, which, it is feared, will result in the loss of over 30 lives. The Osceola Copper Mine is one of the deepest in this country, and on Saturday most of the men were working some 2500 feet from the surface. As far as can be ascertained a fire broke out in what is known as the 37th level, with the result that great quantities of carbonic acid gas were generated, and penetrated into every part of the mine. The flames also spread and soon cut off the escape of a party of 30 men who were working in the most remote level. These can only be rescued, if at all, through a drift long since abandoned, and it is almost certain that they have already perished. Two hundred men were working in other levels when the fire started. They made their way to the shaft as best they could, many fainting by the way overcome by the gas. Most of these men were rescued alive, but some are still in the workings.

BANNER GOLD MINE, LIMITED.

The first ordinary general (statutory) meeting of the Banner Gold Mine (Limited) was held on Monday, at Winchester House, Captain EUGENE TOLLMACHE presiding.

The CHAIRMAN said: Gentlemen—This meeting, as you all know, is held to comply with the law, which demands that the shareholders shall be called together within four months of the formation of any company. Very little news, as a rule, is put before the shareholders at such meetings, but I propose to give you a brief description of the property we own, and to tell you what the policy is that your directors propose to pursue. This course will, I think, be appreciated; because, owing to the fact that all the shares were taken up privately, there was no need for the issue of a prospectus. Our mines are situated in one of the greatest gold-producing countries in the world, and everybody knows what enormous wealth has been extracted from California. Writers appear to differ as to whether California or South Africa carried the palm for gold production last year; but I think I am right in saying that no gold mine exists in South Africa which is producing anything approaching the yield of the great Utica Mine, in California, which, I am informed, pays its lucky owners a monthly profit of £170,000. Still, there can be no doubt that California will have to do her utmost if she wishes to keep pace with South Africa. Now, I do not want anybody to infer from what I have said that I consider all gold mines in California are rich, or even good, merely because they are situated in that great gold-producing country. We all know there are failures there as everywhere else, and that great discrimination is needed before anyone embarks his capital in mining shares.

Before I accepted the position I occupy in this company I took pains to thoroughly satisfy myself that the mines it owns, and its prospects, were exceptionally good. The company possesses two mines—the Banner and the Amosky—which adjoin each other, but it is to the former of these that my remarks apply, because until further development work is done upon the latter I can only tell you that the Amosky ledge has been found to be about 14 or 15 feet wide, carrying low-grade ore. It is not the intention of your directors to work upon this ledge at present, but to devote all energy to the Banner, as I shall shortly explain to you. The mine is situated on the south-east side of Table Mountain, about 4 miles from the terminus of the California Northern Railroad, and about five hours' run from San Francisco. We have two reports upon it, one of them being from an expert who for ability and integrity ranks, I believe, second to none. I refer to Mr. J. B. Low, of San Francisco, who, I understand, has for many years been adviser in mining matters to Mr. John W. Mackay and other mining magnates of America. I mention this because Mr. Low's report carries very great weight with us, and it is as well that I should explain the reason. The mine has had a remarkable history which Mr. Low, in his report, sums up both concisely and clearly. He says:—"The mine was located and worked by Messrs. McSmith and Sparks about 1857, and is reported to have produced \$600,000 from rock, the greater quantity of which was worked by arrastras. At or immediately below the 200 level, the mine, owing to poor and insufficient timbering, caved badly, and was allowed to lie idle through a misconception of the extent of this cave. After considerable desultory efforts to open up the mine by different parties, a New York company purchased the property, and carried the shaft to the 300 level, at which point further work on the Banner was suspended, owing to the broken country encountered, and to an erroneous opinion as to the value of the Amosky vein to the east. The company, after carrying out some very expensive and useless development work on the Amosky, suspended, and the mine was added to those, the reopening of which by competent men is greatly increasing the gold production of this State." He then goes on to show what has been done since the property passed into the hands of those now interested in it, and says:—"The mine passed into your possession, and the shaft was carried below the disturbed strata to the 500 level, where a crosscut was driven west. After considerable exploration work on this level the true fissure was struck, and a rich ore-body encountered in it a short distance north of the crosscut. On the 600 level the fissure is found even more perfect than it is on the 500 level, the walls carrying a heavy graphite 'putty' gouge, the vein matter filling the fissure and the blue laminated ribbon quartz showing up well; in fact, all favourable signs are present, and on this level the fissure has widened out to about 8 feet between walls, an increase of about 4 feet in width as compared with the 300 level. The continuance in depth of such a fissure in this formation admits of no doubt, and the development of the mine shows that pay ore extends throughout the shoot from the surface to the lowest level, on the floor of which the richest rock yet taken out of the mine is found. As I have stated, the 600 level is very near the unbroken formation, and sinking will find a perfect pay-shoot, the upper and broken apex of which produced under your management \$65,000. The thorough opening of the mine should be pushed by sinking the main shaft to the 1000 level, opening the fissure by crosscuts, and by steady exploration on the 500 level. I have known the Banner Mine for many years, having visited it first at the time it was being worked by its original owners; and even at that distant day I was impressed with the probability of the permanence and richness of the mine. The ledge is carried in as promising a fissure as I ever saw, and there is no doubt in my mind that it contains rich ore shoots to the south and north of the one now being worked, and that the north-west feeders encountered on the 500 and 600 levels come to the fissure from a rich and unknown ledge in that direction. In my judgment, from the known dip of the diabase forming the western boundary of the slate, a ledge will be found on the contact of the slate and diabase, and the mine will then take rank among the foremost producers of this State. In an experience of 46 years I have seldom been upon a more perfectly-equipped mine than the Banner; all the works are evidence of the thoroughness, skill, and economy of the management. The electric machinery runs with absolute precision, giving the very best results, and I note that arrangements are made so that steam can be coupled on should the electric power fail. I expected to find a well-equipped, well-opened, and well-managed property, but the conditions at Banner far exceed my expectations, so much so that I cannot advance a single suggestion that would in any way add to the good of the mine. With the admirable system of maps and surveys now in your possession, the future development of the mine will be an easy task. You own a most valuable property, and no time should be lost in opening it up in depth." When such an authority as Mr. Low says that we have struck the true fissure, that the continuance in depth of this fissure admits of no doubt, that the greater the depth the richer the ore, and that immediately we have sunk 300 feet or 400 feet deeper, and reach the point where the slate and the diabase come into contact, the mine will rank among the foremost gold producers in California—when he says all this, and in no equivocal manner, I feel that we are justified in fully believing, as we do, that we have got hold of one of California's bonanzas. For upwards of three years development work has been pushed ahead vigorously at a cost approximating £50,000, and during this development work the ore that has been extracted and milled has yielded, up to the end of last month, nearly \$80,000, the average having been £7 per ton, which everyone will admit is a remarkably good indication of what we shall find when the workings are at a deeper level. What we now propose to do is to follow the recommendation of both Mr. Low and our mine manager, Mr. W. H. Rodda, by sinking as quickly as possible to the 1000 feet level, so as to tap the rich "mother lode" there; and we propose to provide at least 30 more stamps for handling the ore when we reach that point, as at present we have only 10 stamps running. When this work has been accomplished we have every reason to hope that the dividends will be very large, and for this reason—during the development work I have referred to—the ore encountered yielded \$35 per ton, and as its richness is found to increase in depth, we may fairly calculate on getting \$50 per ton at the 1000 feet level, if not before we reach that point, and then, with 40 stamps running, the profits would admit of more than 100 per cent. per annum. I am aware that this sounds very big, but when we bear in mind that various assays taken from

many parts of the mine during development work ranged from \$142 to \$1500 per ton, I do not think we are expecting too much when we estimate on \$50 per ton on reaching the depth I have mentioned. Mr. Rodda's report entirely coincides with Mr. Low's, both of them being agreed that the mine should be carried to greater depth without delay, and large as is the amount of gold that has been taken from the mine—about \$800,000—Mr. Rodda describes the fissure from which it was taken as "merely a mineral vent for the great mother lode existing below." Our object is to attack this mother lode as quickly as possible. Our entire plant is run by electricity, which, as compared with steam, effects a very great saving. In fuel alone we estimate we save over £2000 a year. The mine is, however, provided with steam-power also, which can be coupled on very quickly should it ever be needed. This morning the following cablegram was received from the mine:—"The shaft has reached the depth of 43 feet below 600 feet level. Winze is down 41 feet below 600 feet level. Work going ahead rapidly and well. Winze is in good ore, which continues to improve with depth. Mill has been running half-time on reserve ore. The mill battery plates look very well. Everything going on well." We consider that very good news.

In the absence of questions, the CHAIRMAN concluded the proceedings by expressing the hope that at the next meeting the directors would have a good report to give to the shareholders, and also a good dividend.

MINES SELECTION COMPANY, LIMITED.

The first (statutory) general meeting of the above company was held on Monday, at Winchester House, Mr. WALTER McDERMOTT (the Chairman of the company) presiding.

The SECRETARY (Mr. John S. B. Samborne) having read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—As the notice convening the meeting will have informed you, this is simply the statutory meeting, and your directors have no accounts to present, nor any official report to make. I shall, however, have pleasure in stating briefly and generally what has been done since the incorporation of the company towards carrying out its objects. Of the total capital of £200,000, the authorised issue of £100,000 has been placed by the directors, and has been practically paid up in full. We have on the books of the company some 232 shareholders, and the shares are being dealt in at the present time at a substantial premium. Out of the issue of £100,000, 22,000 shares were allotted to the vendor syndicate for the cash and assets taken over as part of the purchase consideration, and your directors have pleasure in stating that so far as its assets are concerned, they have, by reason of what has been realised and the market value of the unrealised assets, every reason to be perfectly satisfied with the purchase for the company. The company had the advantage of taking over a going concern with a completed organisation, and in getting the advantage of the collected experience of the old syndicate. We made arrangements with Mr. R. J. Frecheville, one of your managing directors now in South Africa, to represent us there. Mr. Frecheville has had a long and very useful experience in connection with African mining, and is well-known in Johannesburg. He has already sent us a number of interesting letters giving us a good deal of valuable information on which we have been able to make some investments. These we hope in time will turn out profitable. In Western Australia we have two experienced mining men looking after our interests, in conjunction with those of other parties working with us. We have lately secured an interest in a large block of mining property in the Hannan's district of Western Australia, on which our agent reports very favourably. This property will shortly be floated as a company, and our interest will be represented by shares in the same. In the United States we have had a great number of properties offered us, and have looked into a few, but have not committed ourselves to anything of any large amount up to the present time. Mr. Baylis, one of your managing directors, spends a portion of each year in the Western States, and this fact, in connection with our relations with other mining men there, enables us to keep in touch with American mines, and to judge of what is offered, while at the same time we can investigate new districts for ourselves without depending on what may come to us. We have established close business relations with the African Metals Company, which is a strong combination, chiefly of German investors, and has a capital of £400,000. The objects of the company are the same as our own; we hope for mutual advantages to be gained by occasional co-operation. The larger enterprises in South Africa at present are not carried out usually by a single firm or company, but by a combination of large operators and investment companies like ourselves. Your board is unanimous in pursuing a policy of safety rather than one of speculation—that is, in paying more attention to investigations of the actual intrinsic merits of properties rather than to watching the market fluctuations of stocks. The field to be overlooked is wide and increasingly complicated in character, but your directors will spare no efforts to make the company a success, and so justify the confidence placed in them. We do not wish at the present time to say anything about actual earnings, or what we have done up to the present, but feel that, under all the circumstances, we have done everything which would be wise for us to undertake. We do not wish to promise profits until we have actually realised them, or to base calculations too much on merely paper profits, and when the time for paying dividends arrives, which we hope will be before long, we shall endeavour to protect the capital of the company against the variations and uncertainties of the mining business in which we are interested. I hope to have something more to say to you at our next meeting.

No questions being asked, the proceedings terminated.

ORION BELT, LIMITED.

The statutory general meeting of the shareholders of the Orion Belt (Limited) was held on Monday, at the Cannon-street Hotel, E.C., under the presidency of Mr. W. H. FRITH.

The SECRETARY having read the notice convening the meeting,

The CHAIRMAN said: Gentlemen—This meeting is held in compliance with the Companies Act, and is, therefore, only a statutory meeting, and really there is no formal business before us, and there are no resolutions to pass; but as this is the first opportunity which the directors have had of meeting the shareholders, it may interest you to receive some information with regard to the company and its operations. The company was registered on May 17 last with a capital of £250,000, divided into 250,000 shares of £1 each, of which 225,000 have been issued—namely, 175,000 as fully paid-up to the vendors—who, you will see, thus take the entire purchase price in shares, and have thus shown their confidence in the future of the property—and £50,000 effective cash working capital, the remaining £25,000 being held in reserve. The company was not advertised, as the whole of the working capital was found privately. The company was formed to acquire and work 406 claims immediately adjoining the property of the Orion, Minerva, and the South Orion Companies, which claims had been carefully selected by Mr. Victor Wolff, who had had many years' experience of the Orion reef as Chairman and managing director of the Meyer and Leeb Gold Mining Company. The property was reported upon by Mr. Wolff by Mr. Lang, manager of the Orion Company, and by Mr. Davy, manager of the Meyer and Leeb; in addition to which, the directors obtained a direct report from Mr. J. C. S. Benyon, Assoc. Mem. Inst. C.E., of Messrs. Benyon and Godfrey, mining surveyors to the East Rand Proprietary Mines, Henry Nourse, United Langlaagte, and others. According to Mr. Benyon, the claims are situated about eight miles from Johannesburg on the Black reef series of reef. The claims are all in one block, and number 406. He reports the distance from the outcrop of the reef of the Orion Company to the Northern boundary of our property to be about 7000 Cape feet, but as the Black Reef only dips between 5° to 7° at the outcrop, he considered it reasonable to suppose—from his experience in the Meyer and Leeb, Orion, and

Minerva Companies, and from bore-holes put down on adjoining properties—that the reef on these claims should be about at a depth of 300 to 350 feet vertical. He says:—"The average thickness of the Black reef may be estimated to mine about 3 feet, but with sorting the actual reef milled may be taken about 2½ feet," and he adds: "If the reef is found at the depth estimated, the working depth being so small, there is no reason why the mine should not be worked as cheaply as any on the Rand, and with cyanide works a very substantial profit should be made." Although from the information at the disposal of the directors, it was known that a considerable amount of good mineral had been obtained from the workings of the Orion and Meyer and Leeb, the outcrop mines on the reef, they felt that the work absolutely accomplished up to that time was not sufficient to afford firm grounds for relying on the reef running through the property, and, therefore, they looked upon the purchase as being of a somewhat speculative character, and desired to hold the property until such time as the works on the outcrop companies should have been sufficiently extended to afford some additional data for estimating the position and value of the reef on the deep levels. Since the company was formed Mr. Chouan, manager of the Champ d'Or, reported by cable as follows:—"Tonnage of ore of all the claims, 5,000,000 unbroken. Expect to strike reef at depth of 152 feet on 30 claims at 464 feet on 374 claims. Consider property one of the biggest and most valuable on Rand." This he has since confirmed in a full report to the company. Only last Monday the directors received information from a private source that on a property almost adjoining, a body of ore, "assaying 2 ounces, and running right into the Orion belt," has been struck, and that the developments in two other properties on the same reef are better than ever expected, and those who seem in the best position to judge, from the knowledge of the reef, state that they have great faith therein, and think that these properties should in time rank as high as any of those on the Main reef series. This information is, of course, not official; it is only private, and requires confirmation. I should not omit to mention that there is a good water right, and that as the main line of railway from Cape Town to Johannesburg passes through the property, the initial expenditure for the transport of the machinery and stores should be minimised, and a great saving of time effected. Advances have been received within the last few days from our solicitors in Johannesburg that the claims have been duly transferred and registered in the names of the company, and your directors have appointed a board in South Africa, consisting of Mr. W. H. Adler, Chairman of the New Crosses Gold Mining Company; Mr. Francis Lowrey, director of the George and May and other companies, and who is well known as agent in South Africa for the South African Gold Trust; and Mr. Victor Wolff, Chairman of the Meyer and Leeb Gold Mining Company, who will act as managing director for this company in South Africa; and I think the shareholders may be congratulated that their interests in South Africa will be represented by these gentlemen. Mr. Wolff and Mr. Lowrey propose to proceed immediately to South Africa with a view to commencing operations forthwith upon the property. Before I sit down perhaps I should mention that negotiations are taking place for an amalgamation of this company with two other companies, and that considerable progress has been made therein. It would be premature to say more at the present time than that, if the proposed arrangements be carried out, they will, in the opinion of your board, tend greatly to the reduction of the expenses, and be mutually highly beneficial to the companies interested. (Applause.) There was no resolution to submit, and no questions being asked, the proceedings terminated.

GOONGARRIE GOLD FIELDS, LIMITED.

The statutory general meeting of the Goongarrie Gold Fields (Limited) was held on Thursday at the offices, 1, Whitlington-avenue, Leadenhall-street, E.C., under the presidency of Mr. CHARLES RONALDSON (the chairman of the company).

The SECRETARY (Mr. D. S. Whitlaw) having read the formal notice of meeting,

The CHAIRMAN said: Gentlemen—You are aware that this is our statutory meeting, and on these occasions it is not usual to go very profoundly into matters connected with the company, and for a very good reason—namely, that the statutory meeting being called in compliance with the Act of Parliament which governs these companies, the time that elapses between the formation of the company and the meeting is of such a short duration that the directors in most companies are not in a position to render as full an account of the proceedings and the position of the company as they otherwise would be enabled to do. However, in our position to-day we are able to give you very encouraging advices, and to bring them down to the latest moment. The directors lost no time in proceeding with the objects of this company, and I think that when you have heard my remarks you will be perfectly satisfied with the present position as well as with our prospects. I may congratulate the shareholders generally on having secured such a splendid property as the Boddington Mine, which was only selected by our agents in Western Australia after various fields had been visited and a great number of properties inspected. Considerable development work had been done by the original owners prior to the acquisition of the mine by this company, several shafts having been sunk at different points along the line of reef, all giving splendid prospects. The principal shaft was down 113 feet, exposing the reef from top to bottom without a single break, and widening out from 1 foot 8 inches to 3 feet 6 inches. Development has been continued in this shaft, and it has been found that the reef improves as depth is attained. Mr. Charles Crossland, who is superintending the development of the mine, writing under June 14 last, says:—

While there I found the work done during the last month (as per terms of original agreement) to the drives extending north and south along foot-wall side of reef 30 feet each way, exposing the stone a distance of 60 feet. The drives are alongside of the reef, leaving the stone untouched. In two places I had holes drilled into the reef, each hole 20 feet from shaft. The reef proved 2 feet 10 inches wide in the south drive and 2 feet 3 inches in the north drive. The drillings from both I have carefully panned, with the following results:—From the south drive 3 ounces per ton, from the north drive the drillings were exceedingly rich—1½ lb. of same gave a result of 95 grains, equal to 30 ounces per ton, and my intention is to continue these drives as far as air will permit, and test every 10 feet by borings, from which we will then be able to fairly estimate the returns to be expected.

In the same letter Mr. Crossland says he is fully convinced, from his knowledge of formations, that the property will be a great dividend-paying mine, and reflect credit upon the company. As it was considered advisable to have a report upon the property by an independent engineer, Mr. George Seymour, of Messrs. Bainbridge, Seymour and Co., was instructed, he being in the colony, to visit and report upon the property. This he did, and he fully endorses the high opinion of it already formed. Extracts from his report were published in the prospectus, in which he states that samples of quartz taken from the shaft had yielded 4 ounces 12 dwts. 4 grains, and 4 ounces 15 dwts. per ton. He concludes his report by recommending the property as constituting a permanent investment. You are also aware, from the notice that we lately issued, that the board has the advantage of one of its number being on the spot—namely, Mr. Voitch. He is at the mine at the present moment, and he cabled us a report which, as you are aware, was forwarded by circular to the shareholders a few days ago. That report is as follows:—

Boddington: The mine looks even better than I anticipated. After carefully examining the present workings, my conclusions are that the mine will undoubtedly become a very valuable property. A trial crushing from all available points in the mine has yielded 4 ounces of gold per ton of 2140 lbs. There seems every prospect of this being fully maintained. Ore in sight amounts to 9000 tons; commence crushing ore to-morrow.

AMERICAN MINING RETURNS FOR AUGUST.

The following are the returns for August from mines whose shares are dealt in on the London market, and the outputs for the four preceding months are also given:—

MINES REPORTED ON.
J. B. AUSTIN, Mineralogist. Adelaide, S.A.

So far it would seem as though the question were too simple to perplex any experienced geologist, who can always tell whether the constituents of a deposit were or were not of alluvial origin, however complete may have been the metamorphism that the deposit has subsequently undergone. The difficulty, however, lies in this that the definition we have been using is a purely genetic one. We are compelled to define alluvial gold as gold that has been formed in a particular manner, and this is obviously a point that cannot be decided by direct evidence, but alone by inductive reasoning. Unfortunately, the very question how nuggets were formed is one upon which geologists are divided into two very opposite camps. There is a complete consensus—indeed, there can hardly be two opinions as to how the small-rounded grains, to which we referred above, have been produced, but the mode of formation of large nuggets is very far from being settled. Some geologists hold that large nuggets were produced, like the smaller grains, by the disintegration of reefs and subsequent transportation by water of the huge masses of gold so liberated. Others maintain that this explanation is utterly inadequate to account for all the observed facts, and that nuggets have been formed *in situ*, and have grown from a small nucleus, mostly a grain of gold, by the deposition of gold from a solution of that metal in meteoric waters. Much may be, and very much has been, said for either view. "Who shall decide where doctors disagree?" We, for our part, have no such pretension; we merely chronicle the fact that these conflicting views are held by men of the greatest eminence in their profession. It is, however, evident that the existence of this two-fold view as to the origin of nuggets makes their classification by a genetic definition a very difficult matter. If the definition of alluvial gold as gold that has been carried by fluvial action be accepted, and if the views of these geologists who consider nuggets as having been formed *in situ* should prevail, we should then find ourselves in the absurd predicament that an alluvial digger is entitled to the small grains of gold, but not to the big nuggets. We do not know how the lawyers would settle this point, but we know something of alluvial diggers, and we venture to prophesy that if such a *bizarre* interpretation should ever be held as sound in law, big nuggets will become alarmingly scarce. Obviously, the safest course will be to set genetic definitions aside, and to define alluvial gold as water-worn gold, contained in a bedded deposit of water-worn materials. Then the fact that one particular piece of gold is not water-worn, whilst the remainder is, would not take the deposit, which must be judged by its general characters, out of the category of alluvial, and this is clearly as it should be. We should thus also be able to distinguish sharply between what are and what are not true alluvial deposits. Thus the "banket" of Johannesburg, though a bedded deposit of rounded water-worn pebbles, just like in this respect the "cement" of California or Australia, is not an alluvial deposit, because the gold is not water-worn, but on the contrary is highly crystalline. For the same reason, the nuggets of gold found in the loose drift on the surface of Devil's Kantoer, in the south-east of the Transvaal, is not alluvial gold, because it occurs in sharp-edged, unworn crystalline masses. On the other hand, the loosest gravel or the hardest cement containing gold in water-worn rounded grains or masses is a deposit carrying alluvial gold; must inevitably be so considered, and cannot but be subject to the laws and regulations that govern alluvial gold mining.

BRITISH COLUMBIA'S FUTURE.

SUBSCRIBERS and readers of *The Mining Journal* are aware of the efforts we have continually made to enforce upon the scientific and investing public the claims of British Columbia. We have published evidence from time to time conclusively demonstrating the richness as well as the great advantages which this colony possesses for the successful development of its mining industry. It is strange that in spite of this evidence people still display a somewhat marked contempt for the colony, but we think we now observe signs that this neglect will not continue much longer. At the present moment the many properties exploited there are assisted solely by American capital, very little English capital—in fact, scarcely any—having found its way there. It is agreed upon by all experts who know anything of the country, that it is not only extremely rich, but that the facilities for working—transportation, labour, &c.—are abundant, in fact, that they compare extremely favourably with the advantages possessed by other more prominent gold fields. At the present moment there is a local gold boom raging, due to the promising discoveries that are continually being made in various portions of the colony. In consequence of this, miners are rushing there by thousands, and gradually, but only too surely, the attention of the outside world is being attracted in the same direction. In a paper recently read before the Royal Colonial Institute, Professor Sir G. M. Dawson, K.C.M.B., F.R.G.S., Director-General of the Royal Geological Society of Canada, stated that the Cordilleran belt had, whenever it had been adequately examined, proved to be rich in precious metals as well as in other ores; and though some parts of this ore-bearing region are undoubtedly richer than others, generally speaking it is throughout a metalliferous country. "The Province of British Columbia alone from south-east to north-west includes a length of 800 miles of the Cordilleran region, and adding to this the further extension of the same region comprised within the boundaries of the Dominion of Canada, as a whole, its entire length in Canada is between 1200 and 1300 miles. Circumstances have favoured the development of the mines of the Western States of the Union, but it is as nearly as may be certain that the northern half of the similar region will eventually prove equal in richness to the southern; and when the mines of these Western States may have passed the zenith of their productiveness, those of the North will be still increasing in

this respect." The Professor then pointed out that, in addition to gold, British Columbia is extremely rich in numerous other minerals. Here may be found large deposits of iron, whilst copper ores have also been discovered in many places. Mercury, in the form of cinnabar, promises to be of value in the near future, whilst plumbago, mica, and asbestos are also known to exist. Coal, likewise, is abundant, and at the present moment rests on a substantial basis of increasing prosperity. Mr. JOHN B. HOBSON, in the course of his speech before the Chamber of Mines, in San Francisco, in December, 1894, enthusiastically exclaimed: "I do not hesitate to predict that the day is not far distant when the gold output of British Columbia will astonish the civilised world." Had we space at our disposal, we could, of course, enumerate the confirmatory opinions of many other experts, but we have sufficient evidence, we think, to say that British Columbia is a country destined to come to the front, and that in the not distant future, and it will be strange if English capital is longer withheld from it.

The interests of the colony were enthusiastically advanced by the Chairman at the extraordinary general meeting of the Lilloet, Fraser River, and Cariboo Gold Fields Company held this week. The object for which the meeting was convened was to increase the capital of the company to £300,000, by the creation of 250,000 shares of £1 each. If we were to rely exclusively upon the statements made at the meeting, as well as upon the reports of the experts, from which the Chairman quoted at considerable length, we could arrive at no other conclusion than that the company was destined to become highly successful. It is necessary, however, to put a certain discount upon the statements delivered at meetings, for it is always one of the objects of the Chairman to put as roseate a complexion on the affairs of the company as he possibly can. The above company is not a new one. It is an old concern which, so far, has not been conspicuously successful. One reason advanced for this was the neglect of the shareholders to subscribe the necessary capital. To obviate this difficulty, therefore, the directors have now invited them to subscribe this additional capital. The shareholders have unanimously consented to do so, but it is questionable whether they would have subscribed it had the directors of the company not come forward in the handsome manner they have done. For instance, one director has subscribed £30,000, another £20,000, whilst the Chairman has induced his firm and friends in the country to subscribe £40,000. Of course, this is conclusive proof of the faith the board have in the prospects of the company, and no doubt it is one of the reasons why the shareholders have so unanimously adopted the new provisions which were laid before them at the meeting. The board is undoubtedly a powerful and influential one, and they appear to be greatly satisfied with having secured a manager in whom they place the greatest confidence. Whilst developing the Lilloet properties, they have also been prospecting and examining claims and mines throughout the whole of British Columbia, and have succeeded in securing several properties which appear to be very promising. The Chairman at the meeting gave details of the present position of the six properties which have been selected, and judging from these there is every appearance that the mines will turn out very valuable. As for the resolutions which were adopted at the meeting, these appear to us very reasonable, and though criticism might with advantage be directed to one or two particulars, still they are not of sufficient moment to be energetically advanced. For instance, we see no reason for increasing the board of directors to nine. We think that a smaller directorate would be quite sufficient to manage the affairs of the company, and certainly it would be more economical. As the board have hitherto received no remuneration, one cannot find fault with them for making a provision for guaranteeing them individually a minimum sum of £200 per annum, but we think that they might, with some consideration, have allowed for an additional 10 per cent. out of the profits a little later on. However, as this is a matter for the consideration of the shareholders, and as the latter are quite in favour of this provision, it is no concern of ours. Should, however, the future not turn out as successful as the directors anticipate, this provision may perhaps go against them, and to some extent alienate sympathy.

NOTES AND COMMENTS.

THERE have been several statutory meetings held this week, and no doubt we shall be quite overwhelmed with them for sometime to come. These meetings, of course, are simply held to comply with the dictates of the law, and at very few indeed do we hear anything which is likely to foreshadow what the future will bring forth. Westralia (Limited), the shares of which have been in considerable favour of late, is one of the few exceptions to this rule. The statutory meeting was held on Monday, much before the time, therefore, when it should have been held in accordance with legal requirements. No doubt the directors, thinking they had done extremely well, were anxious to meet the shareholders, to impart to them the cheerful news of the early success which had attended their efforts. The company has acquired a concession for the exclusive right of supplying electric light to the municipality of Coolgardie for 21 years. This concession has been resold to a company formed for the express purpose of taking it over. This latter company is called the West Australia Electric Lighting Supply Company. We are certainly inclined to agree with the Chairman that it is somewhat of a feather in the cap of Westralia (Limited), that so young a company should have had the privilege of conferring upon the township of Coolgardie the great advantage of substituting, in place of the present primitive lighting, the latest mode of lighting that science so far has invented. In addition to this, the Chairman informed the shareholders that they have acquired a mining property in Coolgardie upon which a great amount of development work has been done

which company they hope to bring out within the next few weeks. They have also arranged the terms for the purchase of another mining property, the whole of the working capital of which has been guaranteed. In answer to a question, the Chairman announced that the estimated profit already made of the contracts of the company comes to very nearly the amount of its capital. If the progress of this concern keeps on in the same ratio, undoubted prosperity is awaiting it.

ANOTHER statutory meeting was that of the Orion Belt (Limited), which, as may be inferred from its name, is a South African concern. Unlike Westralia (Limited), the directors have allowed the limit of four months to elapse before convening the meeting, being anxious, no doubt, to obtain as much encouraging information as possible to lay before the shareholders. The capital of this company is £250,000, in shares of £1 each, the whole of the working capital being subscribed privately. It was formed to acquire and to work 406 claims adjoining the properties of the Orion, Minerva, and the South Orion. The claims are situated about eight miles from Johannesburg, on the Black Reef series of reef. Unfortunately, this series has not a very high reputation for richness, and very possibly this fact might influence some people to regard the company's future doubtfully; and this we are inclined to do ourselves, in spite of the wonderful cable received from Mr. Chouan, in which he stated that, in his opinion, "the property is one of the biggest and most valuable on the Rand." Although the shares stand at a fair premium, this is no evidence whatever of the value of the property, as many instances might be produced to show that the shares—especially of South African companies—are far in excess of their real value. We hope, however, that the property will prove a great success.

THE statutory meeting of the Witpoortje Gold Mines (Limited) was also held this week, and naturally all that the Chairman was able to do was to quote the opinions of experts on the position and probable future of the company. The property is situated about 18 miles west of Johannesburg, and as two good roads run close to or through it, and as the railway is only about 5 miles away, the property as regards transport is extremely well off. In addition to this, as the Chairman announced, with much satisfaction, coal can be delivered on the property at about 20s. per ton, while last, but not least, there is a splendid supply of water for all mining and milling operations. The company owns 53 claims in one compact block, to the south of which is the farm Vlakfontein, and to the east the farm Roodepoort. On the latter farm are situated the well-known mines Durban Roodepoort, United Main Reef, Princess Estate, and Banket. Three well-known experts in South Africa have reported very favourably on the company's property, and from their reports the Chairman quoted at some length. The policy of the directors, as announced by the Chairman at the meeting, is one heartily to be recommended—one which, indeed, the directors of too many mining companies do not carry out. It is not only the most minerlike policy, but it is the fairest from a shareholder's point of view. It is their intention first to open up and develop the property, and after they have ascertained its value to proceed to purchase and erect the necessary machinery. This is certainly putting the horse before the cart, but others generally commence by putting the cart before the horse, and thus instead of making progress, they make headway in an opposite direction.

It is too early yet to attempt to forecast the future of the Mines Selection Company, but, judging from the signs of the times, and from the persons who are directing the affairs of the concern, there need be but little despondency as to the future. As might be gathered from its title, the object of this company is to examine and select in all parts of the world properties which have promising indications. A company of such a character, of course, must have in its service mining engineers of ability, repute, and integrity. The Mines Selection Company is well served in this respect. Mr. Walter McDermott, who is its Chairman, is a gentleman whose name is known throughout the world, and no one who has the least knowledge of him, direct or indirect, would hesitate to place his interests in his hands. Another well-known engineer, who has acquired an enviable reputation, is Mr. R. J. Frecheville, who, some time ago, proceeded to South Africa to represent the company there. Of course, the Chairman at the statutory meeting last Monday could say very little as to what had been done already, for it requires, of course, considerable time for an undertaking of this nature to get into working order. In West Australia, we are informed, the company have two experienced mining engineers looking after its interests, and they have lately acquired a large block of mining property in the celebrated Hannan's district. This property, upon which a very favourable report has been made by the company's agent, will shortly be floated on the market. In the United States a great number of properties have been offered to the directors, which, of course, they are considering. We certainly think that with such a board of directors to represent them the interests of the shareholders will be well conserved, and we can consequently look forward to the future with a great amount of hope.

ANOTHER exploring company, formed with the object of selecting properties in Western Australia, is called "The Gold Explorers (Limited)," the statutory meeting of which was held this week. This company has recently been reconstructed, and it is not surprising, therefore, considering the facility with which capital in these days is subscribed, that the reconstitution was a success. As a result of the strengthened financial position of the company, the Chairman was able to announce that already considerable progress has been made in selecting and acquiring certain properties. One has been selected definitely, and is situated on the Premier line of reef, which the Chairman announced is identical with and in the same position as

that of the Miner's Dream and other properties of a similar character existing in the Coolgardie range. An option to purchase this property has been secured on very favourable terms, and the directors have cabled their agent at Coolgardie to inspect and send a telegraphic report, and as soon as this done it will be issued to the public. The Chairman also announced that a reef has already been proved on both sides. In addition to this property the company possesses the Bayley's South Consolidated property, which is situated in the immediate vicinity of Bayley's Reward. A splendid opportunity is afforded at the present moment to exploring companies to earn immediate and large dividends, and undoubtedly the great object of the directors of such companies should be, not to let the grass grow under their feet. The Board of the Gold Explorers (Limited) seem to be alive to this fact, and the result of their united energy, so far, has been extremely gratifying.

The shareholders of the Coongarie Gold Fields (Limited) seem, from all accounts, to be in for a pretty good thing. The statements delivered at the statutory meeting this week must have filled them with much enthusiasm and hope, and it is not at all surprising that the meeting passed off with such unanimity. The company seems to possess in the Boddington Mine a property of rare promise. This mine was not acquired until after it had been considerably developed, and when every facility was afforded to the agents of the company to gain some idea of its value. For instance, several shafts had been sunk at different points along the line of reef. The principal shaft was down 113 feet, exposing the reef from top to bottom without a single break and widening out from 1 foot 8 inches to 3 feet 6 inches. Development has since been continued in this shaft with the result that the reef improves as depth is attained. Most favourable reports have been made upon the property by experts of reputation, and a great deal of value must of course be attached to the opinion of Mr. Seymour. It will be remembered that extracts from this gentleman's report was published in the prospectus, in which he stated that samples of quartz taken from the shaft had yielded over 4 ounces to the ton. In that report he recommended the property as a permanent investment. Mr. Chas. Crossland is also quite assured of the permanent richness of the mine, and he, therefore, expresses his conviction in no equivocal manner. As a matter of fact, it seems to be the opinion of everyone who has examined the property that it is a very valuable one. Mr. Veitch, one of the directors, is on the spot, and he has cabled his own opinion to this effect. It is possible, of course, for people, and even experts, to be misled by appearances, and thus, perhaps, it would be premature to assert that this property will turn out extremely valuable. All that can be said is that appearances are certainly in favour of this, which, after all, is a great deal to assert.

No one will be inclined to adversely criticise the decision of the shareholders of the Emerald (Reward) Gold Mining Company in adopting the scheme of Mr. Porritt, as laid before them in the circular of July last. The property which the company was originally formed to work has proved so far disappointing, and this being so, there seems to be nothing for the shareholders to do but to develop it further, and to acquire others. The proposals put before them by Mr. Porritt—which, of course, he thinks will ultimately make up for the disappointment—puts a different complexion on the position of the company. As the Chairman said, and as everyone seems to agree, it would be bad policy to dispose of the Emerald property. It is well that under the circumstances the directors have no need to ask for further capital. They seem to have been economical in spending that which in the first place was placed at their disposal. The £3000 which they have in hand will go a long way in developing the Emerald property, and also the others which they are recommended to acquire. Of course, as the Chairman indefinitely announced, the shareholders must look forward to the possibility, yes, the probability, of finding further capital, but when this necessity arrives further evidence will be laid before them as to how these other properties are likely to turn out.

It is very rare, indeed, now to hold in the City meetings of Californian gold mining companies. One of the signs of the times, however, is the flotation of new companies possessing properties in nearly every gold mining region in the world, so that it is quite in the order of present things that we should hear of the statutory meeting of a new Californian gold mining company. The name of this new concern is the Banner Gold Mines (Limited); and judging from the statements delivered at the meeting, and the report that has been made upon the property by a Californian expert, there would seem to be a very prosperous future awaiting the company. Some few weeks ago we published a paragraph giving a few details of the company and the property which it owns. There was no prospectus issued, the capital being subscribed privately. It appears to be an old property, given up a few years ago after the shaft had been carried to the 300 feet level, "owing to the broken country encountered, and," in the opinion of Mr. Lowe, "to an erroneous opinion as to the value of the Amosky vein to the east." If we were not accustomed to listen to glowing statements at statutory meetings we should be inclined to be extremely hopeful of this concern; but our experience always dictates calm judgment, and, therefore, we refrain from saying decidedly that the mine is likely to turn out extremely valuable. Indications are certainly in favour of this, but many things may happen to alter them. It is our sincere hope, however, that the company will be as successful as many other Californian concerns have been, for every success is calculated to benefit the mining industry at large.

The mining market was, on Saturday morning last, thrown into consternation on the news of the death of Mr. F. A. Thompson,

a gentleman who had identified himself prominently with the formation of West Australian companies. In connection with these, Mr. Thompson was very widely known and respected. From the very first moment West Australia became prominent, Mr. Thompson was one of the first and one of the most eager to advance its interests. He sought every opportunity of praising its vast mineral wealth and prospects, and was a thorough believer in its future. He was not brought up originally to the mining industry, but first of all applied himself to the legal profession. This, however, not proving congenial to his nature he followed the bent of his inclination, and began to devote himself to mining. His first experience was gained in Mexico. After leaving the latter place he stayed for some time in Colorado, where he successfully visited the mining centres in this State. He subsequently went to the Transvaal, where he became connected with the Henry Nourse mine, and, along with Mr. Curtis, located the Village Main Reef. From the first he was a confirmed believer in the Deep Levels, and, of course, the recent development of these was to him a source of considerable gratification. It was naturally feared that by his death a great number of the shares held by him in the various West Australian companies would be thrown on the market, but letters have been published in the Press from a gentleman appointed to advise his widow, stating that no apprehension of this kind need be created.

The progress of the American iron trade boom is astonishing, even the Americans themselves—or, rather, its rapidity is. The stoppage for nearly two months of the mines which furnish about one-third of the entire ironstone supply from the Lake Superior region has frightened some of the pig-iron consumers. They have hastened to provide for winter wants, and about a dozen large concerns have secured four to eight months' supplies of raw material. This fact explains largely the extraordinary prices which crude iron has reached within the last two months. During the past three months Bessemer pig-iron has seen successive advances, amounting to as much as \$5 a ton, and grey forge iron \$3. Finished iron is now beginning to go up. The Western Bar Iron Association have recently met and put up prices \$2 per ton; whereupon the manufacturers of cold rolled shafting advanced rates at one stroke \$10 per ton. The demand for steel plates made in the Pittsburgh district is stated to be greater than for 40 years past for boiler, fire-box, and similar descriptions. Some of the works are full up, and will accept no orders at any terms for three months. Will it last? is the question now being asked on both sides of the Atlantic. Many hold that the demand is so far ahead of the output that prices are bound to stand for some time yet, whilst others are of a directly opposite opinion. The autumn and winter can alone solve the problem. Meanwhile English iron and steel manufacturers are benefiting by the high American figures, which allow us in some lines to get in and undersell.

THE MINING MARKET.

FRIDAY EVENING.

A Pressure of Official Liquidations and a Jewish Holiday Unite to Check Fresh Business.—A Dull Finish, with Unimportant Changes on Balance.

THIS has been a week of indecision—almost of suspended animation—in the Mining Market. When we last wrote we stated that the Settlement, although nominally concluded on the preceding Thursday, could hardly then be said to be over. Day after day the selling out for "names" has gone on, the Official brokers having established a record in the volume of business of this class which came into their hands. It is not considered etiquette for a broker to bid for shares under the hammer. The bargains that are to be picked up in this way are a perquisite of the jobbers, and many of these have spent the whole week round the rostrum, to the natural prejudice of ordinary business. The liquidation and weeding out have been on the largest scale that we can remember, and although a dullness of tone was inevitable, the firmness of the market under the circumstances is, indeed, remarkable. An illustration of the manner in which calculations are upset by unforeseen circumstances was afforded on Saturday in the depression of the West Australian market on the news of the sudden death of Mr. F. A. Thompson, one of the largest operators in the securities of this section. Overnight the market had been buoyant, and held out every promise of further improvement. In a few minutes, however, the whole current of affairs was changed, and business has dried up in a manner that far exaggerates the importance of the deceased gentleman's influence. As a matter of fact the pretext for calling a halt was welcomed by the jobbers, who had become thoroughly exhausted with the stress and excitement of the last few weeks' business. On Thursday and to-day the Jewish contingent was conspicuous by its absence, the commencement of the Jewish New Year being observed as a strict holiday. The absence of this enormous factor of support to the Kaffir circuit provided an opportunity to those on the spot to offer shares and put prices down. The net result of this action will be that the gains of the Settlement commencing on Tuesday next will be considerable, and the Account in course of conclusion will be remembered as including one or two of the dullest days since the boom set in.

The chief event of Saturday was the commencement of the special Settlement in Barnato Consols, which were freely contended at 7½ to 10 per cent. The Barnato stocks generally were firm, whilst Land shares were dull. The West Australian market was dull on the death mentioned above, and there was very little going on in Miscellaneous. On Monday the African market opened strong, the departure of Mr. Barnato for Paris and other European centres being put about as a bull point. It was in the stocks controlled by his firm that the greatest activity existed, but throughout the better-class shares there was a revival with special buoyancy in Chartered and East Rand. West Australians, however, did not recover from the depression of Saturday and Miscellaneous were inclined to recede rather than improve. On Tuesday the course of events was very similar to that of the preceding day, Barnato stocks being well supported, whilst weak-kneed operators of the West Australian section showed anxiety to get out of their commitments, with the natural effect of depressing prices. There were isolated gains in Miscellaneous,

and a fair business was done in Chartered Towers varieties. On Wednesday there was a reaction in Kaffir in anticipation of the Jewish holidays and the Settlement, and following the lead of the Paris Bourse, which had turned seller. The day's changes, however, were insignificant. West Australians were dull to flat, and there was hardly anything doing in Miscellaneous. Things were dull on Thursday, and not much better to-day. "Nothing doing" is the stereotyped bulletin from the House.

South African Shares.

The bull party in Barnato stocks has made the most of "Barney's" visit to Paris and his conference with Sir Edgar Vincent, but the only shares which are appreciably better on balance are Barnato Consols, which were made up for the Special Settlement at 4½, and on the second day at 5, and after advancing to 5½, close ½ better at 5½. In spite of a great deal of tall talk, little progress is made in hoisting Barnato Banks, which, after being offered at 3½, advanced on Tuesday to 3½ "buyers." The last price, 3½, shows a gain of ½. Buffels were run up to 9½, but close unchanged at 8½. "Johnny's" Investments have been 6, leaving off ½ higher at 5½. Changes of ½ to ½ are shown in Crescus at 3½, Ginsberg at 1½, Glencairn at 4½, May's at 3½, Primrose at 7½, Rietfontein at 5½, and Spas Bona at 2½. Knight's have fluctuated between 9½ and 10½, but close unchanged at 10. A sudden demand put Langlaagte Royal up to 3½, but the gain was not maintained. Some strength was shown in the Robinson stocks during the earlier days of the week, Randfontein touching 4½ and Block B 3 3-16. The former shares have eased off to 3 15-16 on the approach of the Settlement, whilst Langlaagte Estates are ½ better at 6½. An enormous business has been done in East Rands, often to the neglect of everything else in the market. The price has touched 11, and at 10½ marks a gain of just a point on the week. Anglo are ½ down, at 7, and Comets unchanged at 4½. Rand mines have been enquired for by substantial buyers, and mark a gain of 2½, at 4½, the record figure up to the present. Another strong feature has been the buying of Goldfields Deep, which close below the best at 10½, a gain of ½ on balance. Other Deep Level shares have been quiet. Of the steady dividend-payers, Simmer and Jack have been conspicuous with a spurt of a couple of points to 23½. Feris is unchanged at 20½, whilst Salisbury has improved to 5, and Wemmer to 11½. City is ½ down at 7, whilst the most important declines are shown in Modders at 14½, Jagers at 8½, Heriot at 10½, and Jubilee at 10. So far as the general list is concerned there is not very much of interest to chronicle. Shebas have been widely "tipped" for a rise on cable reports of new strikes of gold; but the shares are only ½ higher at 2½. Luipards Vlei have been 33s., but close only a shilling to the good at 31s. Randt Gold are rather easier at 7s. 6d., whilst Randt Reefs have slightly improved, at 15s. 6d. The Van Ryn Group has been dull, the parent Company's shares shedding ½ at 9, whilst Norths, after fluctuating between 1½ and 2½, close rather down at 1½. Eastleighs have gained ½ at 2½, but most of the other changes are in the downward direction. Johannesburg Gold Fields have improved 1s. 6d. to 11s. 6d. The feature in the Land and Exploration section has been the remarkable strength of Chartered, which have been bought in tens of thousands up to 8½. The arrangement of options is said to have had a good deal to do with this movement. The last price, 8½, shows a gain of ½ on the week. Consolidated Gold Fields have recovered ½ at 16½, and Gold Trusts are a like amount better at 10½. Renewed activity has occurred in New Africans, which have changed hands at 10½, but close at a gain of ½ at 9½. Austral Africans have been firm during the week in the neighbourhood of 3. Oceana are slightly easier at 3½, and Mozambique have fallen ½ to 2½. The demand for Rhodesian Mining and Finance has continued, satisfactory reports having come to hand as to the progress of development on the various properties. "Becha" are ½ down at 3½. Anglo-French Exploration have been exceptionally strong at 7½ upwards, closing, however, rather below that figure. A slight relapse in Rand Explorations has afforded the well-informed to get some cheap shares. Henderson's have also slipped back ½ to 4½.

A disposition to sag away has manifested itself in the Lydenburg group, Balkis at 8s., Esteling at 9s., and Graskop at 8s. 6d., being all rather lower. Lydenburg Estates are ½ down at 2½. Some big buying orders from the Cape gave a temporary spurt to Spitzkopps in the middle of the week, but the price is practically unchanged at the finish at 1½.

In Diamond shares there has been less excitement than for some time past, De Beers closing ½ up at 30½, after touching 30½ on Tuesday. Jagers are without change at 11, but Beaconsfields have scored a gain of ½ at 2½, whilst Gordons are 2s. lower at 11s. 6d.

West Australians.

The difficulty experienced at the last Settlement in carrying over shares in this department has caused a good deal of liquidation during the current week. Shares have been very freely pressed for sale, with the result that a general reduction in quotations has ensued. In the Hannan's group especially, where the rises have been greatest, realisations have been the order of the day, and it speaks volumes for the inherent strength of the market that the depreciation is not more pronounced. As we have hinted above, the death of Mr. Thompson has served as a pretext for sales of all sorts. Great Boulders, in spite of a 2s. dividend, and another extraordinary crushing return, are ½ lower at 6½. Hannan's Reward have fallen ½ to 3½, and Brownhills ½ to 6. True Blue has been in special request, finishing unchanged at 3½, whilst gains of ½ are shown in Hannan's Star at 2½, and Napier at 1 11-16. Menzies Reefs are ½ easier at 2½. There have been some excited movements in Associated Gold Mines, which went within a shade of 3 on Saturday, and were offered at 2½ on Thursday. This morning there was a spurt to 2½, with a subsequent relapse to 2½, which leaves the price half a point down on the week. A circular has been issued by a prominent outside dealer, advocating the purchase of these shares, a fact which has probably actuated the inside dealers in banging the market. Bayley's Reward had a sudden jump to 12s. 6d. on Thursday, closing with a gain of 2s. only at 9s. 6d. White Feathers suffered severely during the slump, and were offered on Wednesday at 2½, recovering this morning to 2½, and dropping back to 2½, which is ½ down on the week. Fingall Reefs suffered severely on the news of Mr. Thompson's death, and close ½ lower at 2½. The feature of to-day's market has been the strength of Hampton Plains, which have been largely bought up to 4½, thereby recovering the whole of an early fall. Londonderry's are slightly easier at ½, and Sherlaw's Gold 6d. down at 12s. 6d. The proposed increase of capital will serve as a bonus to holders, the new shares being offered to them *pro rata*. Lady Loch has gained ½ at 2, and there are numerous other changes of insignificant importance. As far as the Finance Companies connected with this market are concerned, there has been a disposition to let quotations down. Exceptions, however, are seen in the case of

Moosman	5/ 8	5/ 8	1 0	—	1 0	125,000	W. Austr.	28, St. Swithn's
Mount Margaret	1 1/2	1 1/2	1 1/2	1 0	0 19	1,000,000	Queensland	9, Gracochurch-st.
Mount Morgan G.	2 1/2	2 1/2	2 1/2	1 0	-/8 Sept., '95	0 100	Murc. W. A.	11, Q. Victoria-st.
Murchison Gift	10/ 11/	10/ 11/	10/ 11/	5/ 0	—	0 50	Murc. W. A.	Winchester House
Murchison Gold	4/ 3/	4/ 3/	4/ 3/	1 0	—	1 00	Murc. W. A.	23, College Hill
M'chie's N. Ch. m.	1 1/2	1 1/2	1 1/2	1 0	-/6 June, '95	0 196	Queensland	30, St. Swithn's
N. Australian G. F.	1 1/2	1 1/2	1 1/2	1 0	-/6 Sept., '95	0 196	W. Austr.	22, Helen's Place
New Queen	9/6 10/6	9/6 10/6	9/6 10/6	10/—	—	0 100	Pilbarra	22, Winchester House
North Boulder	9/ 10/	9/ 10/	9/ 10/	5/ 0	—	0 40	Queensland	10, New Broad St.
North Coolgidge	1/8 2/ 2	1/8 2/ 2	1/8 2/ 2	5/ 0	30 X Aug. '95	1 00	Pilb. W. A.	38, Coleman-street
N. Qld. M. Agency	2 1/2	2 1/2	2 1/2	1 0	—	1 00	Victoria	7-8, Gt. Winchester
Pilbarra G. F.	1 1/2	1 1/2	1 1/2	1 0	—	0 12 8	W. Austr.	4, Bishopsgate-st.
Queen's Bldy Un.	13/ 14/	13/ 14/	13/ 14/	—	—	1 00	N. Zealand	Dashwood House
Ramage Syndicate	1 1/2	2 1/2	3 1 0	—	1 00	60,000	Ood gardie	5, Old Jerry, R.C.
Royal Oak	3/ 3/8	3/6 4/ 5/	5/ 0	—	0 30	200,000	W. Austr.	4, Bishopsgate-st.
Royal Sovereign ...	1 1/2	1 1/2	1 1/2	1 0	1 00	60,000	N. Zealand	5, Old Jerry, R.C.
Sam's With. of Nat.	5/ 8	5/ 8	5/ 8	1 0	0 18 0	200,000	W. Austr.	33, Old Broad Street
Scam's Australian	1/4 1/4	1/4 1/4	1/4 1/4	1 0	-/3 Aug., '95	1 00	N. Zealand	Wincher House, W.
Scotty's Hauaki ...	1/4 1/4	1/4 1/4	1/4 1/4	1 0	0 20	40,000	N. Zealand	5, Drapers garden
So. Londonderry ...	7/8 8/8	7/8 8/8	7/8 8/8	1 0	0 19 0	200,300	W. Austr.	20, Bucklersbury
Stone Prop. of W. A.	1/4 1/4	1/4 1/4	1 0	—	1 00	255,000	W. Austr.	28-9, St. Swithn's
True Blue	3 1/2	3 1/2	3 1/2	1 0	1 00	—	W. Austr.	36, Crosby-square
Victoria Associatn.	—	—	—	1 0	-/3 Sept., '95	1 00	Que. Tow.	34, Gresham-st., E.
Victory	6/6 7/6	6/6 7/6	6/6 7/6	5/ 0	-/2 Mar., '94	0 50	Chrs. Unit.	—
Walhi. G	6 1/2	7 1/2	8 1 0	2/- Sept. '95	1 00	187,000	N. Zealand	11, Abchurch-lane
Waitekauri	4 1/2	4 1/2	4 1/2	1 0	1 00	138,000	N. Zealand	11, Abchurch-lane
W. Extended	3 1/2	3 1/2	3 1/2	1 0	0 100	138,000	N. Zealand	11, Abchurch-lane
Waratah	5/8 5/8	5/8 5/8	5/8 5/8	1 0	0 100	100,000	Cryden, N. Z.	43, Thredneedle-st.
Wentworth Estan.	1 1/2	1 1/2	1 1/2	—	0 50	180,428	N. S. Wales	19, St. Swithn's
Wentworth ... G	1 1/2	1 1/2	1 1/2	1/- Aug '95	1 00	500,000	N. S. Wales	4-6, Eurogort-st.
W. Argentine	1/8 1/8	1/8 1/8	1 0	—	1 00	150,000	N. Zealand	2-5, Queen-street
W. Aust. G. Conces	2 1/2	2 1/2	2 1/2	40 X Sept., '95	1 00	175,000	W. Austr.	32, Old Broad-st.
W. A. Ex. & Fin.	4 1/2	4 1/2	4 1/2	2/- May, '95	1 00	200,000	W. Austr.	54, Old Broad-st.
Do. Found. Deb.	60 70	60 70	60 70	—	40 00	5,000	W. Austr.	54, Old Broad-st.
W. Australian G. F.	8/8 8/8	8/8 8/8	1 0	5/- Aug., '95	1 00	65,000	Coolgidge	28-29, St. Swithn's
W. Aust. Mining	8/8 8/8	8/8 8/8	1 0	—	1 00	104,141	W. Austr.	257, Winchester House
W. Aust. Pioneer.	1 1/2	1 1/2	1 0	—	0 130	20,000	W. Austr.	139, Cannon-street
Do. Founders	55 65	55 65	1 0	—	85 00	300	W. Austr.	28, St. Swithn's
Do. Share Corp.	1 1/2	1 1/2	1 0	—	1 00	150,000	W. Austr.	54, Old Broad Street
Do. Trust	3 1/2	3 1/2	3 1/2	—	1 00	50,000	W. Austr.	28, St. Swithn's
White Feather ...	2 1/2	2 1/2	2 1/2	—	1 00	60,600	Coolgidge	28, St. Swithn's
Do. United	1 1/2	1 1/2	1 0	—	1 00	75,000	Coolgidge	139, Cannon-street
Zapopan Munkana	8/ 6/6	8/ 6/6	8/ 6/6	—	28,000	N. W. Austr.	70, Bishopsgate-st.	
Zeebani Munkana	—	—	—	-/4 May '95	1 00	60,000	Tasmania	11, Queen Victoria
Zeebani Montana	—	—	1 0	2 1/2 May '95	0 20	12,000	Tasmania	11, Queen Victoria

25 p e Aug. '95	1 0 0	115,000	—	15, Geo. St., Ma. Ho.
—	1 0 0	2,000,000	—	59, Holborn Viaduct.
10 p e July '95	1 0 0	232,738	—	120, Bishopsgate-st. W
—	1 0 0	25,000	—	123, Bishopsgate-st. W
—	1 0 0	37,000	—	19, Finsbury circus.
6 p e July '95	1 0 0	80,000	—	8, Old Jewry.
—	1 0 0	350,000	—	2, Prince's-street.
—	1 0 0	517,000	—	25, Austin Friars, E.O.
—	1 0 0	170,000	—	25, Prince's-street.
—	1 0 0	100,000	—	8, Old Jewry, E.O.
25 Aug., '95	1 0 0	130,000	—	7, Lothbury, E.O.
—	1 0 0	300,000	—	Wardnold-court, f
—	1 0 0	80,000	—	30-31, S. S. Switz's lane
—	1 0 0	—	—	4, Tokenhouse bldg.
—	1 0 0	—	—	55, Bishopsgate st.
—	1 0 0	175,000	—	Winchester House.
1/- Sept. '94	1 0 0	93,000	—	95, Gresham Ho., E.O.
—	0 18 8	850,000	—	12, S. Heien's place.
10 Aug. '95	1 0 0	115,000	—	4, Sun Court, E.O.
50 June '95	1 0 0	250,000	—	8, Old Jewry.
—	1 0 0	130,000	—	8, Old Jewry.
—	0 15 0	80,000	—	6, Great St. Helen's
—	1 0 0	158,000	—	19, St. Swithin's lane.
10 p e June, '95	1 0 0	99,070	—	Winchester House.
—	1 0 0	34,000	—	15, Bishopsgate-st. W.
—	1 0 0	230,000	—	93, Gresham Ho., E.O.
—	1 0 0	—	—	Dashwood Ho.
—	0 5 0	847,976	—	Cophall House.
1/- Mar. '95	1 0 0	439,965	—	Broad-st. House, E.O.
—	1 0 0	285,700	—	76, Old Broad-st. E.O.
10 Mar. '95	1 0 0	910,000	—	21, S. Swithin's lane.
1/- Aug. '95	1 0 0	260,000	—	Suffolk House, E.O.
—	1 0 0	135,000	—	25, Bishopsgate-st. W
—	1 0 0	79,915	—	33, Cornhill.
12 1/2 Sep. '94	1 0 0	60,000	—	Wardnold Court.
—	1 0 0	100,432	—	Manica...
2 1/2 Jan. '94	1 0 0	45,010	—	Broad Street House.
—	1 0 0	144,000	—	110, Cannon-street.
—	1 0 0	75,000	—	53, Gresham Ho., E.O.
—	1 0 0	75,000	—	19, S. Swithin's lane.
—	1 0 0	160,000	—	16, S. Heien's-pl., E.O.
—	1 0 0	120,000	—	12, St. Swithin's-lane.
—	1 0 0	177,000	—	18, St. Swithin's-lane.
—	1 0 0	150,000	—	8, Old Jewry.
—	1 0 0	130,000	—	Winchester House.
100 Aug. '95	1 0 0	55,000	—	147, Cannon-street.
—	1 0 0	240,000	—	19, Bury-street, f
—	1 0 0	200,000	—	8, Old Jewry.
—	1 0 0	250,000	—	3, Cophall-bldg.
10 p e Apr., '94	1 0 0	130,000	—	19, Bury-st., E.O.
—	0 18 0	39,021	—	Wardnold-court, f
2 1/2 July '95	1 0 0	90,727	—	Blomfield House.
—	1 0 0	55,000	—	8, Old Jewry, f

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to acknowledge receipt of a copy of the Mid-September
of Messrs. Mathieson's Monthly Mining Handbook.

GOLD FIELDS OF MYSORE.—Mine report for fortnight ending August 27:—South shaft. The 280 feet level end driving south of 6 inches. The lode has narrowed a little and is now 4 feet wide. There is no change in its characteristic appearance, which is composed of black rock, with vertical veins of quartz, and is charged throughout with arsenical pyrites, its assay value being 3 dwts. 3 grains of gold per ton. The north end has been driven 16 feet 3 inches, total 55 feet 6 inches. The lode has widened out to 10 feet, and is composed of much the same matter as that described above, its assay value being 2 dwts. of gold per ton. The 380 feet level is finished. Tramroads are being laid in the north and south level, where we hope to rise for stoeps in the near future. Middle shaft. Work has been resumed here in fixing the heavy timbers, bed plank, casing, &c., and getting the shaft in readiness for drawing stuff. The loading for the engine is built, and the engine will be put in place shortly.

LADY LOCH.—The manager, under date August 16, reports as follows:—Lady Loch, I am glad to be able to report very favorably on the east winze. We got some splendid stone out this winze and the reef still looks well, but a little smaller, being at this time 2 feet 6 inches wide; and the winze is now down 35 feet.—The Forrest. Middle underlay shaft is now down 76 feet, exposing a solid reef carrying payable gold. I have started timbering this shaft, and hope to finish in about a fortnight. I had two men working on this block about 70 feet east from the Loch reef, for the purpose of picking up the Loch reef, which has been highly beneficial to the Lady Forrest. I cut the reef about 10 feet from surface; the stone is carrying gold visible to the eye, and the reef is already 10 inches wide. (The importance of this reef is overestimated. It not only improves the Lady Forrest, but also enhances the value of the Lady Loch lease, showing the reef continues throughout the property.) Lady Forrest have started work in the north shaft and put the men to work on the new shaft just started about the centre of the property, and have struck a good reef in this shaft about 20 inches wide carrying gold visible to the eye, and I am of opinion that this reef is a good one. It has a good ironstone formation both on the top and hanging-wall. The property is looking well.

the company's property at Talga has been received from H. Walker.—The five leases that form the properties of West Australian Gold Fields Company adjoin one another Talga Talga line of reef, and comprise in the aggregate 53 acres. The outcrop of this reef extends the entire Breen and Wilson's, Walker and Cunningham's and see—a distance of 2000 feet. The top of the reef has and lies in places from 30 to 50 feet, and it is exposed the 0 feet in height. The reef averages from 2 to 5 feet ore is brown in quartz, and every specimen taken from the reef contains fine gold. There is no alluvial gold, the being broken pieces of the reef. The stone, in my opinion, 3 ounces to the ton, and all that I have inspected looks than any I have seen from the Bamboo Creek Mines, the leases, in my opinion, are Breen and Wilson's, Cunningham's and Geyer's. The stone in these ies fine gold distributed so generally throughout they are preferred to any others on the field. Advantage possessed by your property is that it can be admit levels affording from 200 to 300 feet of backs level. Another advantage that your claims have over others is that they are within $\frac{1}{2}$ mile of the river, to this stone can be cheaply conveyed by means of an y for treatment. There is neither water, timber, or y to be feared on this field, as all exist in abundance. To confidently give it as my opinion that the Talga-Talga id in the North-West of Australia, and the group of going to your company is the best in that field.

GOLD.—The manager, under date July 27, writes No. 8 block in section 210. This party have about 25 quality stone, which they intend to crush next week. 24 tons, for a yield of 11 ounces 8 dwts. 19 grains of 24 tons, for a yield of 11 ounces 8 dwts. 19 grains of ed the result of five men's work for nearly five months, sed to get out another crushing, and have put on two ing seven working."

WEST.—Report on operations at mines to date: The Main reef leader, total depth 180 feet; No. 1 winze, total depth 60 feet; east drive on depth 80 feet; east drive on Main reef leader, total depth 80 feet; east drive on Main reef leader, total depth 77 feet; No. 2 main incline shaft, total depth 109 feet; No. 2 reef, total depth 75 feet; crosscut from No. 2 reef 16 feet; making a total depth of 688 feet. Sinking main shaft No. 1. Sinking this shaft was completed, at which point driving on the first level has been sunk on these reefs west of which are an extension of the Kleinfontein series.—fast as possible. The character of the reef driven very satisfactory, the reef varying from 30 inches average thickness of about 39 inches. The reef showing free gold of about 9 dwts.. and panning The leader has an average thickness of about 1 from 1 to 5 ounces per ton. No assays have yet been made. The reef averages 24 inches, and contains free gold of about 11 dwts.—Crosscut about 36 inches south the crosscut south has cut through the reef matter over the entire width pans very well. A crosscut will be continued to intercept the South series. South main shaft No. 2 commenced on this line of reef. Two levels proceeding equal to expectation, the first level on the second level will shortly be reached, when this shaft will be commenced forthwith. No. 1 reef showing all the characteristics of the Modderfontein series. This winze shows two well-defined reefs each, divided from each other by about 18 inches. To determine the actual value of this series depth is obtained and the entire series cut within a width of 50 feet several leaders, also intersecting reefs, showing on the surface from 2 to 3 feet. The manager says he has every hope and reason to believe that the Modderfontein and New Chimes series will be found in this series, and he expects excellent results. Machinery. 80 stamps have been ordered together with the necessary engines, pumps, etc., being a first-class plant of the latest type, suitable to manage the plant in working order as regards. Manager's house; native compound, workmen's quarters, are all erected, or in

METAL CIRCULARS.

Messrs. HENRY BATH and SON'S Copper Report, dated September 17, says:—The Chili charters are advised as 950 tons, and the latest exchange is 17½. From the 4th to the 9th inst. the value of G.M.B.'s fluctuated between £46 15s. and £47 cash, but on the 10th under fear of financial derangement in the United States, the price here began to give way, and £46 10s. was marked, followed by £46 7s. 9d. on the 11th, with a recovery at the close of the day to heavier gold shipments, and this may be attributed in spite of purchase by influential parties on this side of a reported interest in the great Anaconda group of mines of Montana, the argument being that present prices must be upheld, if not pushed higher for a profit to be realised. The production of this group for 1894 was 42,670 tons of fine copper. The market has been easier this morning on slight fall in New York. We close firm at £46 17s. 6d. cash, £47 5s. forward after being 3s. 9d. lower. Business in the United States has quieted down somewhat, but the one continues strong, and for immediate delivery copper is scarce. Shipments thence are moderate, and the larger portions go to the continent, consequently consumers here have had to fall back more upon Chili bars, and a considerable decrease in them has taken place. Imports and deliveries at Rotterdam, Antwerp, and Hamburg amount to about 1400 tons. Imports of American copper into England have in 311 tons, and into France 150 tons, or 461 tons against 2489 in the same year. Total actual deliveries for the fortnight have been 10 tons against 1797 tons imports. Stocks have decreased 1813 tons. Total visible supply shows 53,969 tons against 55,432 tons at fortnight. We have no transactions in furnace material to report.

England and France.	Imports.	Domestic.	Stocks.	Admitted & Chartered.	Total available supply.
Copper at Liverpool, Swansea, and in France	511	1070	41,080	3159	44,220
Foreign copper in London, chiefly Australian and Japanese	337	612	2,484	1100	3,589
American copper at Liverpool, London, and Swansea	411	255	2,724	—	2,724
Foreign copper at Liverpool & Swansea	313	1363	3,299	—	3,299
American copper in France	150	255	392	—	392
Foreign copper in France	75	55	239	—	239
Copper during the fortnight ending on September 3, 1895	1797	3810	49,719	4250	53,969
do do during the fortnight ending on August 17, 1895	2524	3957	51,532	3900	55,432
Available supply, Sept. 16	3657	4403	53,968	3700	56,865
Available supply, Sept. 16	52,319	1893	1893	59,111	70,471
Available supply, Sept. 16	106,258	1888	1397	108,443	108,443
of Chili bars same date: £41 15s., £42 17s., £43 6d., £44 5s., £45 7s. 6d., £46 10s., £47 15s., £48 5s., £49 5s., £50 5s., £51 5s., £52 7s. 6d., £53 6d., £54 6d., £55 6d., £56 6d., £57 6d., £58 6d., £59 6d., £60 6d., £61 6d., £62 6d., £63 6d., £64 6d., £65 6d., £66 6d., £67 6d., £68 6d., £69 6d., £70 6d., £71 6d., £72 6d., £73 6d., £74 6d., £75 6d., £76 6d., £77 6d., £78 6d., £79 6d., £80 6d., £81 6d., £82 6d., £83 6d., £84 6d., £85 6d., £86 6d., £87 6d., £88 6d., £89 6d., £90 6d., £91 6d., £92 6d., £93 6d., £94 6d., £95 6d., £96 6d., £97 6d., £98 6d., £99 6d., £100 6d., £101 6d., £102 6d., £103 6d., £104 6d., £105 6d., £106 6d., £107 6d., £108 6d., £109 6d., £110 6d., £111 6d., £112 6d., £113 6d., £114 6d., £115 6d., £116 6d., £117 6d., £118 6d., £119 6d., £120 6d., £121 6d., £122 6d., £123 6d., £124 6d., £125 6d., £126 6d., £127 6d., £128 6d., £129 6d., £130 6d., £131 6d., £132 6d., £133 6d., £134 6d., £135 6d., £136 6d., £137 6d., £138 6d., £139 6d., £140 6d., £141 6d., £142 6d., £143 6d., £144 6d., £145 6d., £146 6d., £147 6d., £148 6d., £149 6d., £150 6d., £151 6d., £152 6d., £153 6d., £154 6d., £155 6d., £156 6d., £157 6d., £158 6d., £159 6d., £160 6d., £161 6d., £162 6d., £163 6d., £164 6d., £165 6d., £166 6d., £167 6d., £168 6d., £169 6d., £170 6d., £171 6d., £172 6d., £173 6d., £174 6d., £175 6d., £176 6d., £177 6d., £178 6d., £179 6d., £180 6d., £181 6d., £182 6d., £183 6d., £184 6d., £185 6d., £186 6d., £187 6d., £188 6d., £189 6d., £190 6d., £191 6d., £192 6d., £193 6d., £194 6d., £195 6d., £196 6d., £197 6d., £198 6d., £199 6d., £200 6d., £201 6d., £202 6d., £203 6d., £204 6d., £205 6d., £206 6d., £207 6d., £208 6d., £209 6d., £210 6d., £211 6d., £212 6d., £213 6d., £214 6d., £215 6d., £216 6d., £217 6d., £218 6d., £219 6d., £220 6d., £221 6d., £222 6d., £223 6d., £224 6d., £225 6d., £226 6d., £227 6d., £228 6d., £229 6d., £230 6d., £231 6d., £232 6d., £233 6d., £234 6d., £235 6d., £236 6d., £237 6d., £238 6d., £239 6d., £240 6d., £241 6d., £242 6d., £243 6d., £244 6d., £245 6d., £246 6d., £247 6d., £248 6d., £249 6d., £250 6d., £251 6d., £252 6d., £253 6d., £254 6d., £255 6d., £256 6d., £257 6d., £258 6d., £259 6d., £260 6d., £261 6d., £262 6d., £263 6d., £264 6d., £265 6d., £266 6d., £267 6d., £268 6d., £269 6d., £270 6d., £271 6d., £272 6d., £273 6d., £274 6d., £275 6d., £276 6d., £277 6d., £278 6d., £279 6d., £280 6d., £281 6d., £282 6d., £283 6d., £284 6d., £285 6d., £286 6d., £287 6d., £288 6d., £289 6d., £290 6d., £291 6d., £292 6d., £293 6d., £294 6d., £295 6d., £296 6d., £297 6d., £298 6d., £299 6d., £300 6d., £301 6d., £302 6d., £303 6d., £304 6d., £305 6d., £306 6d., £307 6d., £308 6d., £309 6d., £310 6d., £311 6d., £312 6d., £313 6d., £314 6d., £315 6d., £316 6d., £317 6d., £318 6d., £319 6d., £320 6d., £321 6d., £322 6d., £323 6d., £324 6d., £325 6d., £326 6d., £327 6d., £328 6d., £329 6d., £330 6d., £331 6d., £332 6d., £333 6d., £334 6d., £335 6d., £336 6d., £337 6d., £338 6d., £339 6d., £340 6d., £341 6d., £342 6d., £343 6d., £344 6d., £345 6d., £346 6d., £347 6d., £348 6d., £349 6d., £350 6d., £351 6d., £352 6d., £353 6d., £354 6d., £355 6d., £356 6d., £357 6d., £358 6d., £359 6d., £360 6d., £361 6d., £362 6d., £363 6d., £364 6d., £365 6d., £366 6d., £367 6d., £368 6d., £369 6d., £370 6d., £371 6d., £372 6d., £373 6d., £374 6d., £375 6d., £376 6d., £377 6d., £378 6d., £379 6d., £380 6d., £381 6d., £382 6d., £383 6d., £384 6d., £385 6d., £386 6d., £387 6d., £388 6d., £389 6d., £390 6d., £391 6d., £392 6d., £393 6d., £394 6d., £395 6d., £396 6d., £397 6d., £398 6d., £399 6d., £400 6d., £401 6d., £402 6d., £403 6d., £404 6d., £405 6d., £406 6d., £407 6d., £408 6d., £409 6d., £410 6d., £411 6d., £412 6d., £413 6d., £414 6d., £415 6d., £416 6d., £417 6d., £418 6d., £419 6d., £420 6d., £421 6d., £422 6d., £423 6d., £424 6d., £425 6d., £426 6d., £427 6d., £428 6d., £429 6d., £430 6d., £431 6d., £432 6d., £433 6d., £434 6d., £435 6d., £436 6d., £437 6d., £438 6d., £439 6d., £440 6d., £441 6d., £442 6d., £443 6d., £444 6d., £445 6d., £446 6d., £447 6d., £448 6d., £449 6d., £450 6d., £451 6d., £452 6d., £453 6d., £454 6d., £455 6d., £456 6					

	Tons fine. 1895.	Tons fine. 1896.	Tons fine. 1897.	Tons fine. 1892.	Tons fine. 1891.
from Chili and Bolivia January 1 to date	14,697	15,113	14,009	13,328	12,362
from America from January 1 to date	20,068	31,454	27,683	24,354	28,154
from Chili and Bolivia January 1 to date	17,548	18,808	24,481	20,208	25,492
from America from January 1 to date	17,459	21,725	24,688	10,786	14,437
Total.—The arrivals from the West Coast have been as follows:—					
Ores.	Regulus.	Bars.	Ingots.	Barilla.	
Tons.	Tons.	Tons.	Tons.	Tons.	
947	—	—	—	—	
—	—	—	—	—	
—	—	702	—	—	
—	—	—	—	—	
—	—	—	—	75	
—	25	300	—	75=511 tons.	
1893	23	600	—	=611 tons.	
1892	52	545	175	=835 tons.	
1891	932	18	430	=845 tons.	

We estimate the present available quantities of West-

per to be:—

	Ores,	Regulus,	Bars,	Ingot.	Barilla,
anea	.....	.....	.....	.....	.....
erpool..	10	.....	39,154	480	.....
ance.....	.....	.....	275	255	55
.....	10	.....	.....	.....	.....
g about 11,080 tons fine copper, against 1,639 tons on the 3rd inst.	33,749	.....	40,298	735	65
" 32,778	.....	.....	.....	.....	.....
" 34,297	.....	.....	.....	.....	.....
" 33,020	.....	.....	.....	.....	.....

of West Coast copper may be estimated from the follow-

Tons.		Tons.	
at Swansea, Liverpool,	41,080	Sept. 3, 1895,	38,649
chartered for at date of	3,150	Sept. 3, 1895,	38,329
per mail & cablegram...	44,230	Sept. 3, 1895,	38,329
Total	44,230	Sept. 3, 1895,	38,329
same date 1894, Stock	35,749	Sept. 3, 1895,	38,329
1893,	32,779	Sept. 3, 1895,	38,329
1892,	31,257	Sept. 3, 1895,	38,329
1891,	32,320	Sept. 3, 1895,	38,329
for West Coast copper ore...	3,560	Sept. 3, 1895,	38,329

To-day.		Sept. 18 1891.	Sept. 18. 1893.	Sept. 17. 1891.	Sept. 17. 1891.
100/- to 9/9 ...	20 7 9 ...	20 8 7 3/4 ...	20 8 6 ...	20 9 9	
248 17 6 ...	41 15 0 ...	42 17 0 ...	44 5 0 ...	52 7 6	
Nominal.	Nominal.	47 15 0 ...	48 5 0 ...	55 5 0	
at 9/6 to 10/7	about 8 1/4	about 9/	0 9 0 ...	0 10	
descriptions.					

descriptions we quote to-day:—Wallaroo, nominal; Lead about £51; Barra Barra, nominal; English man-
nopper, £46 17s. 6d. cash, and £47 5s. three months.
upper about £16 10s. to £17 cash. Tin closing at
b, £65 15s. three months. Spelter about £15 7s. 6d.
ish about £16. Blende of 50 per cent. is worth
With silver 50 to 80 ounces about £10 17s. 6d.
ent. is worth about £4 per ton.—Lead steady. About
Scottish pigs are about 48s. Middlesbrough 39s. 2d.,
l. cash. Antimony very quiet. Star regulus about
£8 10s. for 50 per cent. good quality and produce.
£ to £15 per ton.—Quicksilver: The official price is
rather nominal about 2s. 6d. less. Bar silver quiet
rent: The Bank rate remains at 2 per cent.

LEWIS and SON'S Mid-Monthly Report on Copper.
September 16, has the following:—A large business in good merchantable copper during the past year has brought the price of cash fell to £46 15s. on 5th., but recovered to £46 12s. 6d. on the report that the Anaconda Mine had been sold, and on 13th to £47 1s. 3d., closing values to-day cash and £47 10s. three months' prompt. Further copper were shipped from here to New York this morning to Messrs. Houston and Co.'s New York country for shipment to the United States; 500 tons been sold in Valparaiso for shipment to New Mining Company. On the 13th inst. the trade was reported that this mine had been sold to an English firm, and we understand that a fourth part of the mine had or transferred that a fourth part of the mine was sold or transferred to an English company—the company obtaining three-fourths—and that shares will be sold some time next month. Argentiferous pig copper

is very scarce, and fancy prices are being asked for it, as consumers hold very small stocks. Chill bars are being bought freely by smelters, presumably to turn into B.S., which at present prices is a profitable undertaking. Producers' returns are as follows:

	1895.	August.	January to August.	1894.	12 months.
European production.....	Tons 7,129	1894.	1895.	1894.	1895.
American production.....	13,190	7,367	56,601	59,585	88,905
Do. Imports.....	4,100	17,115	98,328	98,405	18,400
Do. Exports.....	1,500	15,300	10,480	10,562	17,800
* United Kingdom.....	6,408	43,843	33,562	37,130	
France.....			Tons 836		
Germany, Holland, &c.....			808		
Mexico.....			808		
			2847		

4493
American exports for the first half of September are 1865 tons. Stocks have decreased 1813 tons, and the visible supply 1384 tons. During the past fortnight. Imports to date are 6480 tons less, and deliveries 419 tons greater than last year. The arrivals in England and France have been 1797 tons, and deliveries 3610 tons. The arrivals of Chili in Liverpool and Swansea have been 451 tons, and the deliveries 930 tons, and from other countries 724 and 1698 tons respectively. The arrivals here and in Swansea from the United States have been 200 tons bars, 10 tons ingot, and 190 tons matte, equal to about 311 tons fine, and in France 150 tons fine, and the Chili charters for the past fortnight are advised as 950 tons, and exchange 175-16d. Sales of furnace material during the fortnight have been confined to 200 tons precipitate, Seville, about 70 per cent., to arrive at Liverpool, on private terms. Quotations for pitch, and £47 10s. for three months' prompt copper £47 2s. 6d. for selected ingots £51 10s. to £52, and tough cake £50 10s. to £51 per ton. Ore of 20 per cent. 9s. 3d. Regulus and matte 5s. 6d. per cwt.

Messrs. HARRINGTON and Co.'s Copper Report, dated Liverpool, September 17, says:—Chill charters for the past fortnight are cableed at 150 tons, making the total since December 31 last 16,000 tons, or just 15,250 tons same time last year. Exchange 175-16½. During the past fortnight the market for G.M.B.'s has fluctuated between £13 9½ and £17 3 9½ for cash warrants, and £16 10s. and £16 11s. three months, but to-day, owing to pressure to sell, has been a considerable decline, business having been done at £16 15s. and £17 2½ Gd. cash and three months' respectively. We close this evening with sellers at £16 13s. 9½. cash and £16 11s. 9½. three months. It is reported that bar copper has been shipped from Chili to New York.—Anaconda Mine: Report indicates that a considerable business has been done in the shares of this mining company through the agency of the Exploration Company, and we think it early to give any particulars, as so much must be confirmed. American quotations yesterday were 12-12½¢ or, rather, an average price 12 18-75 cents, a decline of 12½ parts of a cent to 12-25 cents per pound. The following are the returns of the Copper Producers' Committee:—

	August.	Two months.	Maximum allowed under old agreement.
European production ...	7,129	14,117	14,170 tons.
American production ...	14,490	26,818	26,869 "
from Puerto Rico ...	1,000	2,200	2,413 "
Total ...	22,619	43,135	37,457 "
American exports ...	4,492	10,529	10,000 "
and stocks in Liverpool ...			

Stocks in Liverpool, Swansea, London, and Havre are 49,719 against 51,532 tons on the 1st inst., showing a decrease of 1813 in the fortnight. The stocks include about 2300 tons of copper that not yet delivered to smelters. The visible supply for the fortnight 53,976 tons, against 55,360 tons on the 1st inst., showing a decrease of 1384 tons. Refined and manufactured sorts are quoted as being:—Tough cake £50 5s. to £50 10s., best metal sheets 43s. per lb. The sales of furnace material comprised 12 tons River Plate bars, 50 tons argenteiferous matte, on private terms, and 30 tons argenteiferous matte, on private terms.—and £65 8s. 9d. closing to-day at £65 7s. 6d. Australian 6d., English £68 10s., and Peruvian £50 to £62, according to quality. Sulphate of copper firm at £16 10s. to £17 spot and £16 10s. 3d. for Spanish, and £10 17s. 6d. to £11 for Spanish. The market since our last has been steady, and quoted £15 5s. to £15 7s. 6d. for ordinary Silesian brands. Since our last the market has been steady at £7 2s. 6d. per bottle for Spanish.—Bar silver: The market has fluctuated between 30 7-16d. and 30 9-16d., closing to-day at 30 4d. per ounce. Antimony steady; Star regulus at £31 10s. per cwt. produce, about £7 10s. to £8 for 50 per cent. good

GRAND JUNCTION SYNDICATE (LIMITED).—An extra-general meeting of the Waikoi Grand Junction Syndicate was held on Wednesday, at Winchester House, E.C., for Mr. L. Weistead presided, and said he had visited the new Zealand, and had received information from Mr. the manager, as to their condition. On examining the works generally, he found that everything had been could be, but that things were not so satisfactory as he wished them to be. There had been great difficulty in working. After a thorough examination it was thought that the money which the syndicate had was not sufficient for the increased expenditure which permanent works required. The syndicate was formed for prospecting, and given them in the agreement to exercise the right called this meeting to obtain the sanction of the directors for the liquidation of the syndicate and the formation of a new company. By that means the board would have the authority which would be required for carrying out permanent works. The Chairman then moved resolutions to the effect that the syndicate be wound-up voluntarily, and that Mr. Marks be appointed liquidator; that the liquidator should distribute in specie among the contributors any assets of the syndicate, and in particular any shares of any company which the syndicate may be entitled to, and that the directors be authorised to consent to the registration of a new company in the name of the Waikoi Grand Junction Gold Company. — Mr. Davis seconded, and the resolutions were carried. The Chairman explained that the capital of the new company was £150,000, and he believed the syndicate had a very large share of that, and that no one who held any of the shares in it in future.

MICA.—The uses of mica are manifold. One of its most distinctly novel. An ingenious Australian has introduced a mica cartridge for sporting and military use. The filling inside the cartridge is visible, and a sign is that instead of the usual wad of felt a mica substance, being a non-conductor, unaffected by heat as a lubricant. Where smokeless powders, such as nitro-glycerine compounds, are used, mica has taken over every other material used in cartridge manufacture. The peculiar property it has of being transparent, any chemical change in the explosive material is here utilised, the breech and barrel being so constructed that the fouling of the rifle is also avoided, the cleaning the barrel.— *Engineer and Iron Trades'*

NEWS informs us that he has resigned his seat on the Murchison (Western Australia) Gold Syndicate

NOTES FROM ANDALUCIA.

PAPER ON THE CUPREOUS PYRITES DEPOSITS OF ANDALUCIA AND ALGARVE.

RETROSPECTIVE AND PROSPECTIVE.

Extracts and Notes from Mining Operations and Reports on these during the past 25 years.

By WILLIAM GUTHRIE BOWIE.

(Continued from page 1118.)

AMONG the works that may be consulted with profit in respect of the geology of Spain—and especially Andalusia—are those of Verneuil, Colomb, Ezquerria del Bayo, Casiano de Prado, Schultz, Paillette, Amalio Maestre, Le Play, and Murchison's "Siluria." While the differences of opinion are evident among these, they all admit the impossibility of fixing the relative age of the rocks without a personal examination of the fossils of the strata in each district, and correct comparisons. Even Prado estimated the Huelva district as probably Devonian, while inclined to metamorphic and Silurian; and Murchison states, "Whatever be their direction or inclination, the Silurian, Devonian, and Lower Carboniferous rocks of Spain have all been conformably and apparently simultaneously elevated as in France." It has only been after prolonged study as exploitation has advanced that the truer ideas as to the systems in which the cupreous pyrites masses are found have been attained, thanks to the investigations of MacPherson, and the Government geological surveyors Tarin, Mallada, and others connected with the mines in exploitation. Yet there is much still undetermined and doubtful—at least, so far as officially reported, for owing to the difficulties met with, the surveyors have left open to future discoveries many sites, that while classifying them for the present to older systems, are likely to be proved as belonging to more recent geological periods. Thus, they estimate extensions of some of the boundaries, and reductions of some of the others, and confess as to these difficulties. One great difficulty is the way the rocks are altered by metamorphic agencies, and the scarcity of fossils whereby to positively determine these altered portions. In respect of fossils, there is no doubt a scarcity, but this is more owing to absence of time and study to find them, as will be shown in describing the sites where found and being found; but, meanwhile, the Spanish engineers have, besides where it is possible to determine by the reasoning of palaeontology, also determined by that of lithology where the former has been at fault. Certainly a very unsatisfactory determination when the metamorphism of some places is considered, and which the reasonings of lithology would place to older systems, when it is evident by those of palaeontology they belong to more recent ones.

All who are interested and able to peruse the works referred to, and the more recent ones of Professor F. Roemer, Dr. Charles Barrios, Senor Delgado, Groddeck (last edition), Professor Lapparent, Victor Sevoz, M. Paul Choffat, will find in them much valuable information; and although they are contradictory, yet they have a considerable bearing in respect of geological studies in other parts of the world, as well as in the South of Spain and Portugal. The official works of "La Comision del Mapa Geologico de Espana, Huelva," by D. J. Gonzalo Tarin, and "Sinopsis Paleontologica de Espana," by D. Lucas Mallada, are, however, the most modern and detailed, and contain all the latest official datum bearing on the geological matter referring to Huelva and Algarve, and for this reason will now be briefly referred to for the sake of assisting those who may not be able to consult these authorities for themselves.

In making this brief sketch, it will be well to bear in mind the nomenclature used is that generally used by Continental geologists and by the authors of these works, many of the names being obsolete among English-speaking geologists—or, at least, considered as indistinct; as, for instance, "plagioclase" is, according to Dana, a convenient term to cover ignorance, and all are at one as to the convenience of "greywacke." Also the geological scheme of these authors is somewhat different in arrangement and nomenclature when compared with British grouping, and will be explained, as far as possible, where necessary. At the same time, it must be remembered that the positive geology of the same is not yet attained; and so soon as the investigations at present being carried out by professors of geology from Germany are completed there will be considerable divergence on some points of interest when compared with the opinions of the authors to whom we for the present refer.

The geological works of the Spanish Government engineers estimate the following geological systems for Huelva and Algarve in descending order:—

- Post-tertiary.—Both alluvial and diluvial.
- Tertiary.—Pliocene and Miocene.
- Triassic.—This is reported by Portuguese geologists as Liassic.
- Carboniferous.—Lower coal measures divided in two substrata. The upper substratum the Kiesel Schiefer and grauwacke; the inferior is the same, but estimated as more compact.
- Silurian.—Upper Silurian, only group.
- Cambrian.—Upper Cambrian, only group.

Metamorphic: This is divided into an upper and lower.	Upper	1st upper group	Clay slates, Talcose slates, which is divided into two substrata—the upper stratum talcose schists, the inferior stratum the same, with more argillaceous matter.
		2nd middle group	Mica schist.
	Inferior	3rd inferior group	Common gneiss
		2nd inferior group	Glandulous gneiss, this not being present.

The hypogene rocks are—

1. Acidic or orthoclase.—Granite, syenite, and porfido.
2. Basic or Plagioclase.—(1) Diorite in two varieties; one is called Dioritas Autolucas, hence hornblende diorite, and the other micaceous diorite. (2) Diabases pyroxenitic, which may be considered as augitic diorite. (3) Porfidos diabasic; in this last the rocks are called porfido as a distinct rock, but will be best known by such terms as porphyritic diorite or porphyritic diabase, perhaps also, as diabase and dolerite are not distinguishable, then porphyritic dolerite.

(To be continued).

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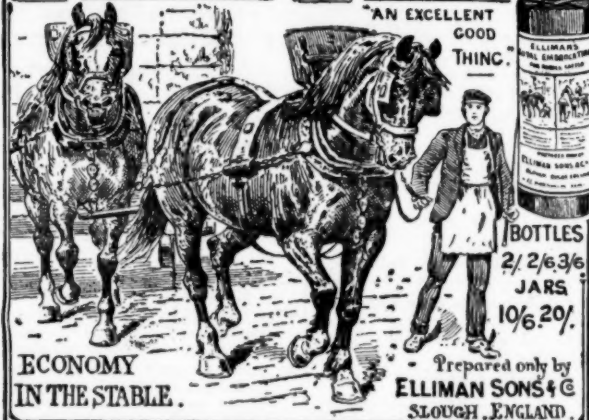
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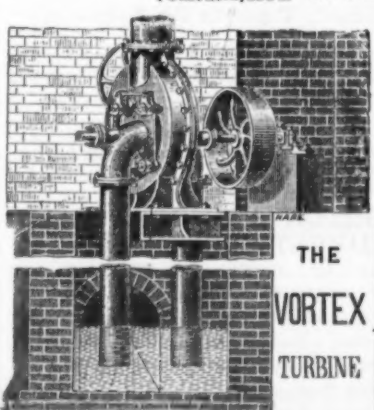
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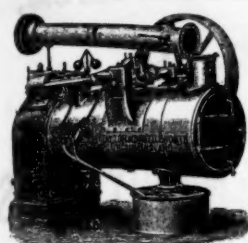
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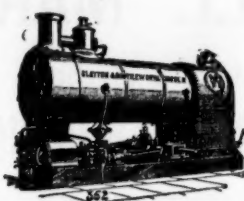
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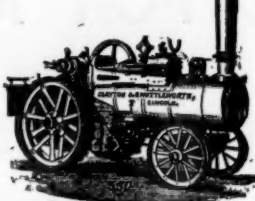
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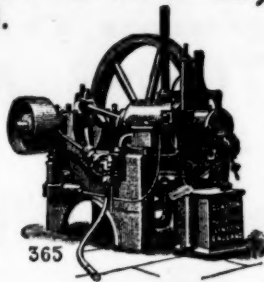
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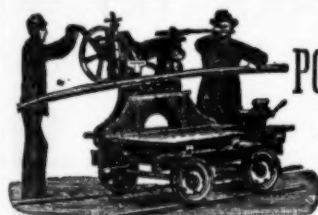
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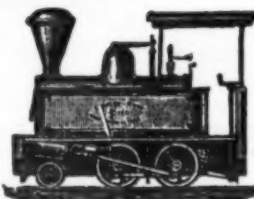
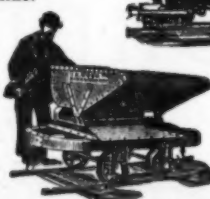
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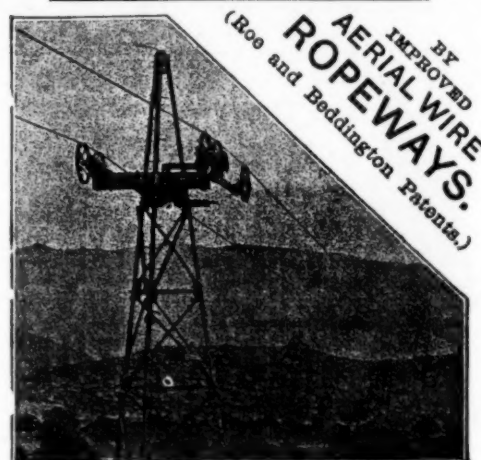
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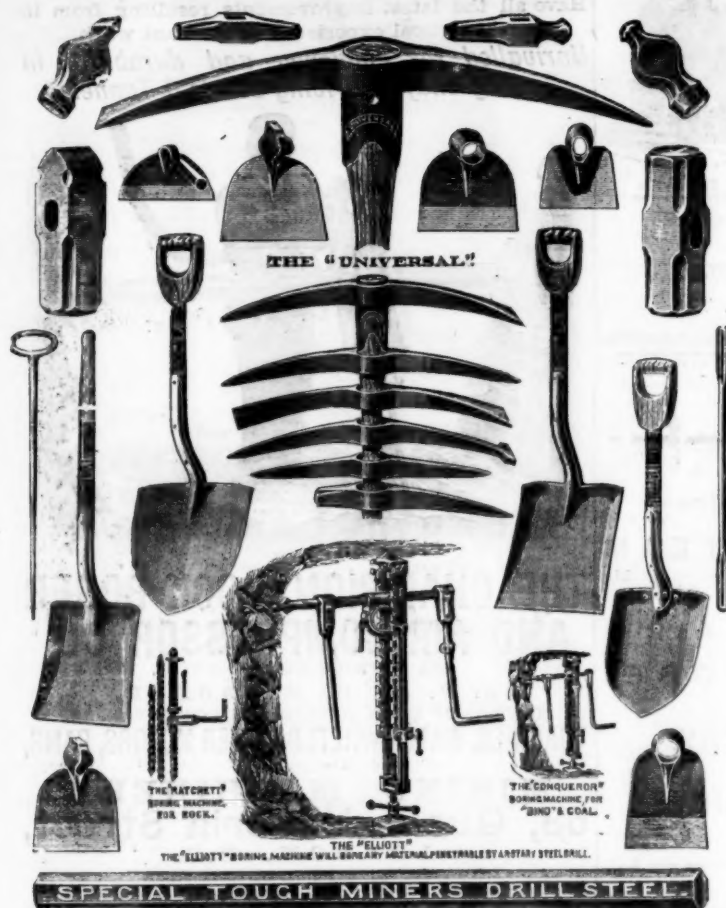
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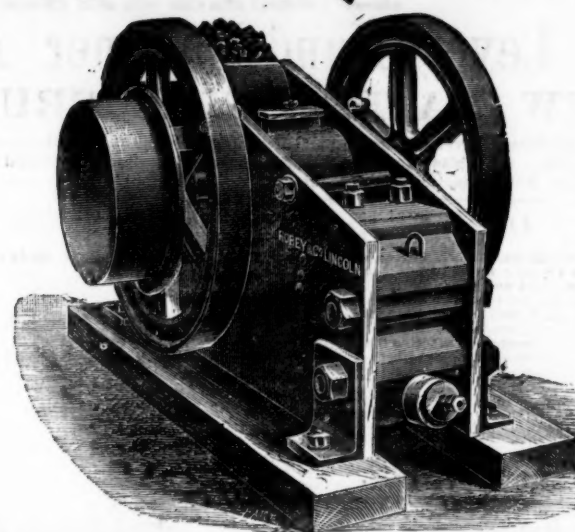
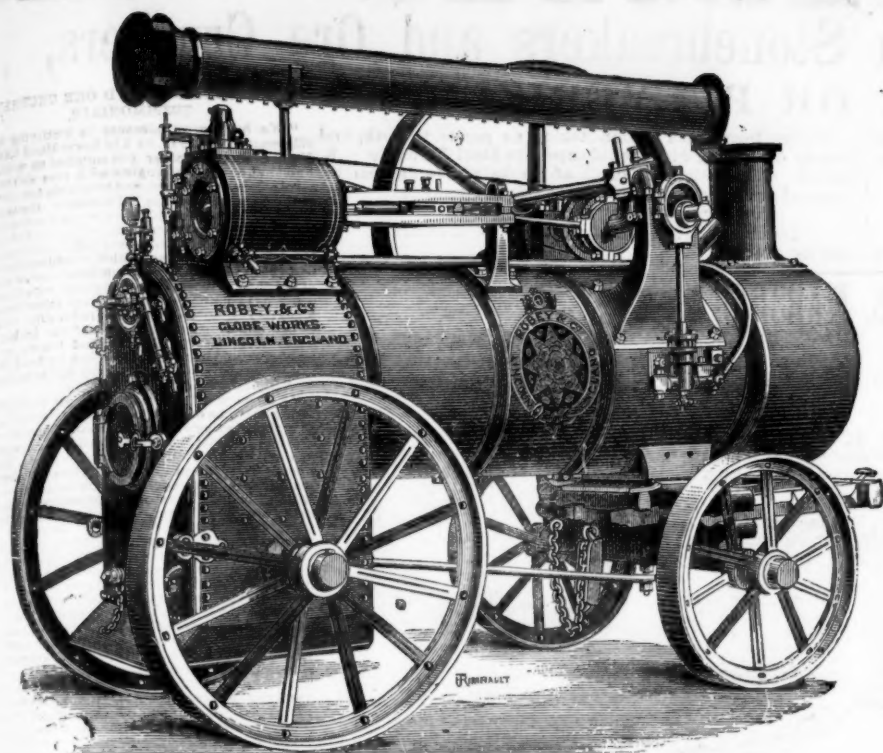
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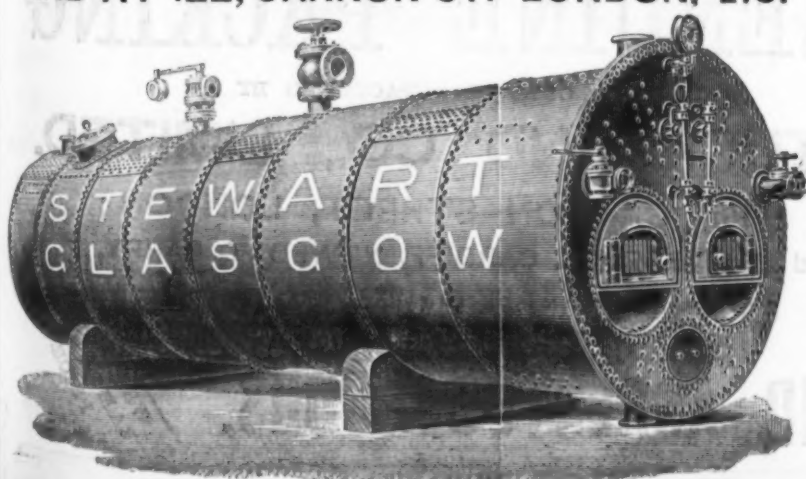
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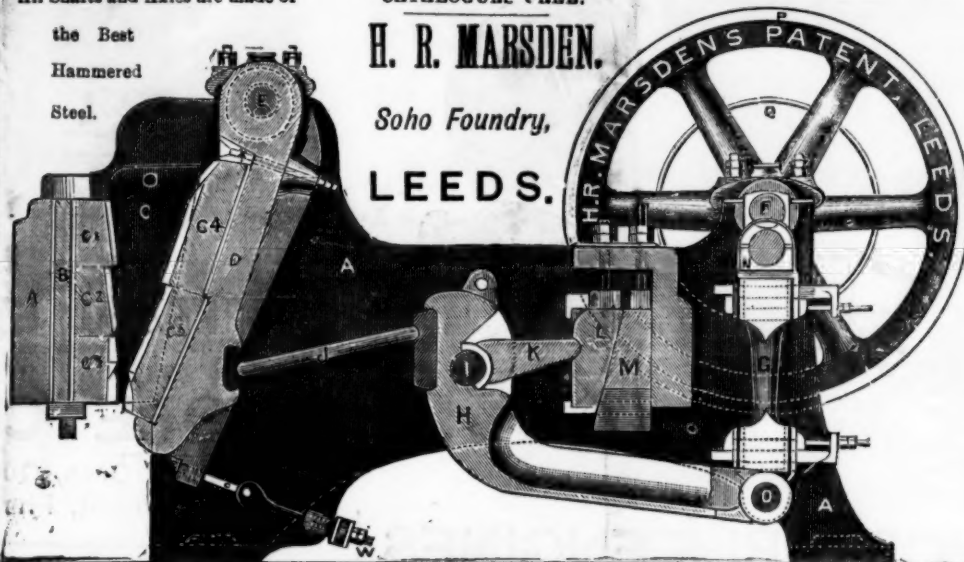
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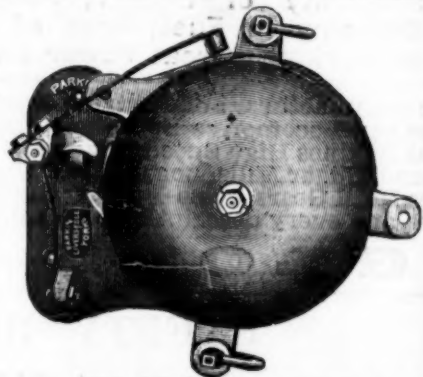
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